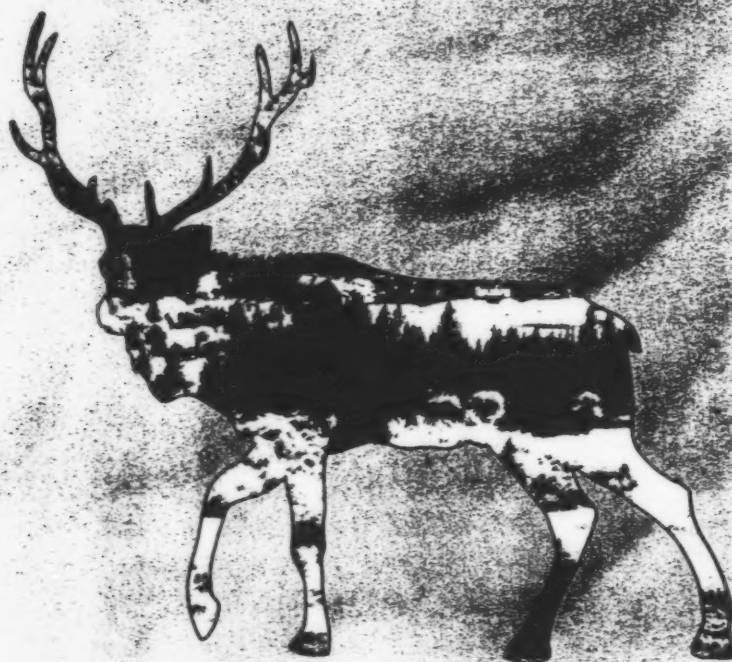




Annual Report 87-88



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FORESTRY, LANDS and WILDLIFE

Office of the Minister

403 Legislature Building, Edmonton, Alberta, Canada T5K 2B6 403/427-3674

July 4, 1989

The Honorable Helen Hunley
Lieutenant Governor of the
Province of Alberta

May it please your Honor:

For the information of your Honor and the Legislative Assembly, it is my privilege to present the Annual Report of the Department of Forestry, Lands and Wildlife, for the fiscal year ended March 31, 1988.

Respectfully submitted,

LeRoy Fjordbotten
Minister of Forestry,
Lands and Wildlife

MINISTER'S MESSAGE

The year 1987-88 reflects a bold and dynamic period of progress and achievement for Alberta Forestry, Lands and Wildlife.

As Minister of Alberta Forestry, Lands and Wildlife since September 1987, the challenge of leading the department into this new period of development and vision for the future has been an exciting and gratifying experience.

The department's Forestry Division and our Forest Industry Development Division played a major role in contributing to the Alberta Government's initiative toward economic diversification. A number of significant, new forest industry projects were announced, placing Alberta at the leading edge of forest industry development in North America. These new, world-class projects, based upon Alberta's abundant timber resources, will ensure a viable and prosperous forest industry for our province for generations to come.

These outstanding achievements were long in the making. Years of hard work to establish or maintain suitable areas of marketable timber began to bring results in the past two years. Domestic and international forest industries entered negotiations with department staff that culminated in the announcement of a number of major forestry projects such as:

The new \$500 million Daishowa Canada pulp mill north of Peace River was announced in February of 1988. With the creation of almost 2 000 new jobs, and a target date for operation of September 1990, the new mill is significant to the future of the forest industry in Alberta.

One month later, a \$360 million project by Alberta Newsprint Company was announced for the Whitecourt area. The first of its kind in Alberta, this world-scale newsprint mill will generate more than 1 000 jobs and is scheduled for completion by 1990.

The \$300 million expansion of the Hinton pulp mill by Weldwood will create 370 permanent new jobs. The expanding and modernizing of the Hinton pulp mill will not only create new jobs, it will ensure the mill complies with new, more strict environmental regulations.

A trade mission to a number of Pacific Rim countries was a major success in promoting the sale of Alberta forest products in that region, and in encouraging overseas investment in Alberta's forest industry.

I was very pleased by the response received by both industry and government officials. The success of the mission can be measured by the number of serious negotiations that took place among Albertans who participated in the mission and the companies we met with while visiting these countries.

A restructuring of the department was announced in December of 1987. Designed to reduce administrative costs and improve delivery of service, the initiative saw the amalgamation of the former Resource Planning Branch into the Public Lands Division. The department also created a separate Policy Secretariat to provide review and analysis of existing policies and regulations and to assist in development of new policy directions. The Land Information Branch and the Bureau of Surveying and Mapping also merged to become the strongest integrated land information service in Canada.

Wildlife '87 continued its important work with the designation of an additional 21 natural areas and the completion of 170 Buck for Wildlife projects. Many organizations, as part of their contribution to Wildlife '87, have become sponsors in these programs. In addition, eight ecological reserves were designated, which the department jointly manages with Alberta Recreation and Parks.

As part of Wildlife '87, my ministry ensured the continuation of the Buck for Wildlife program with a funding commitment of \$3.4 million to be allocated toward 190 designated conservation projects during the year.

Development and enhancement of wetland habitat in the Eastern Irrigation District was also an important initiative during the year. \$1.5 million were earmarked for a three-year program to secure and improve habitat in conjunction with irrigation canal rehabilitation efforts in the Brooks area.

One of the most significant contributions to Wildlife '87 came from Joy and Cam Finlay, who were among those recognized for their efforts with the 1987 Order of the Bighorn Award.

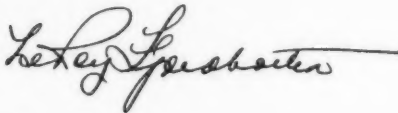
The Public Lands Division's Volunteer Steward Program for the province's natural areas has drawn an enthusiastic response from Albertans throughout the province. The volunteer stewards make a very important contribution, much valued by my department. They serve as the eyes of the Natural Areas Program: observing, recording, along with managing and protecting, our natural areas. These individuals are to be commended for their efforts.

The new Wildlife Act was a highlight of this period. The act is designed to tighten illegal poaching in Alberta assist in ensuring sport hunting remains a challenging experience for the hunter, without depleting our wildlife resource.

Overall, it has been a year of many changes and renewed commitment for the department; one which involves professional management of resources, diversification of our economy, enhanced public communication and continued expansion of conservation activities.

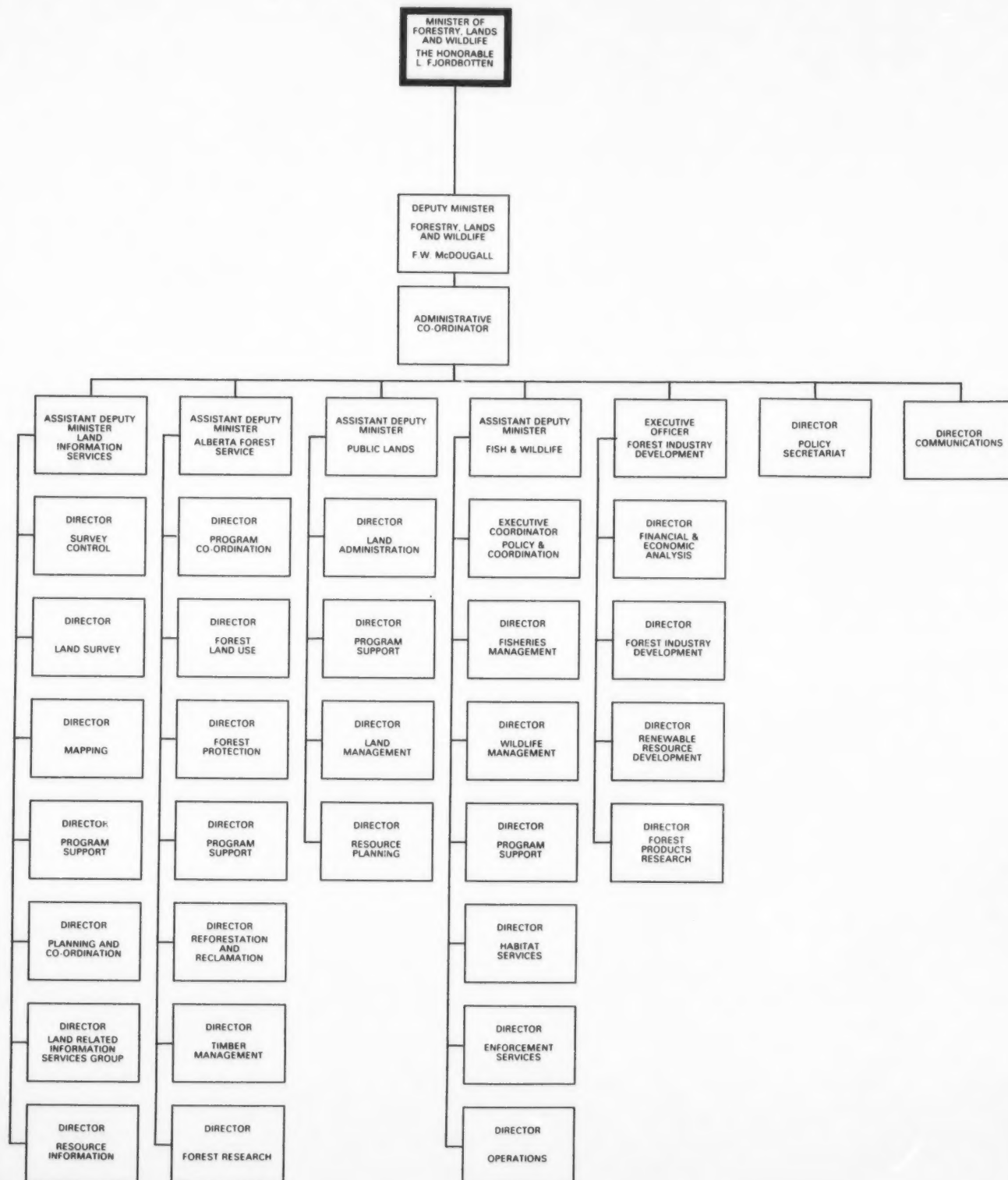
There can be no doubt that forest industry development in Alberta represents a major thrust toward our province's economic recovery. The success of our efforts, thus far, owes much to the abundance of our forest resource, the confidence of our investors, the creativity and cooperation of industry and the enthusiastic support of our communities and our people.

Our forest management program, a partnership between industry and Alberta Forest Service, our conservation initiatives, wildlife habitat enhancement programs, and land resource management initiatives and natural areas programs are successful models for all of Canada.

A handwritten signature in cursive script, reading "LeRoy Fjordbotten". The signature is fluid and elegant, with a long horizontal stroke extending to the right.

LeRoy Fjordbotten
Minister

ORGANIZATION CHART





FISH AND WILDLIFE DIVISION

The Fish and Wildlife Division's mission is to manage the fish and wildlife resources of the Province of Alberta for the benefit and enjoyment of the people.

Operating from a firm set of principles, the Division works to achieve a set of objectives designed to meet its mission. These objectives are:

1. To maintain and protect scarce species;
2. To restore threatened populations;
3. To re-introduce extirpated species;
4. To establish and obtain acceptance for population objectives for major wildlife groupings;
5. To provide a variety of types and amounts of outdoor recreational opportunities;
6. To maximize economic returns from the commercial use of fish and wildlife resources;
7. To strive for no net loss of quality of fish and wildlife habitat;
8. To ensure that fish and wildlife populations are compatible with community interests;
9. To develop and administer legislation in a manner which is beneficial to the fish and wildlife resource, sensitive to public needs and fosters socially acceptable behavior;
10. To minimize the negative impacts of wildlife resources on people and property;
11. To deliver a public education program designed to enhance public sensitivity and understanding of the fish and wildlife resource;
12. To encourage the participation of other government agencies, the private sector, and the public in the enhancement of fish and wildlife habitat;
13. To retain, enhance, acquire and develop habitat for public benefit where species supply and demand

shortfalls exist that are directly related to habitat quality and quantity;

14. To promote and encourage scientific and educational activities that will enhance knowledge of the fish and wildlife resources.

1987-88 was a year for many exciting achievements for the Fish and Wildlife Division. While our various branches maintained and improved upon their programs, the Division as a whole enjoyed several notable accomplishments.

Protection of threatened and endangered species has become a priority objective for the Division. The Policy for the Management of Threatened Wildlife in Alberta states that the chief management goal for threatened wildlife is "to restore populations in Alberta to viable levels." Programs conducted this year included development and implementation of management plans to protect habitat for various threatened species, inventory of threatened species populations, increased public awareness, and improved enforcement of protective legislation. Efforts were focused on the Woodland Caribou Restoration Plan, the Peregrine Falcon Management Plan, and the Wood Bison Recovery Plan.

Measures to restore caribou populations included a research program to evaluate mortality of calves. Information signs and reflective highway markers were placed along Highway 40 near Grande Cache. Additional public awareness programs involved distribution of an information poster, development of a fact sheet, and numerous public speaking engagements.

Restoration efforts for other threatened and endangered species included surveys of population size, breeding success and habitat protection for burrowing owls, ferruginous hawks, peregrine falcons, piping plovers, trumpeter swans, and white pelicans. Restrictive regulations were applied for

the harvest of lynx, mountain goats, and brook trout, and 92 elk were transferred from Elk Island National Park to northeastern Alberta, while nine mountain goats were also transferred to a safer range.

The Division cooperated in a program to re-introduce trumpeter swans into Elk Island National Park. Additional operations included creating a public information sign concerning white pelicans near Fort Smith, and continued maintenance of Wood Bison at the Hay/Zama re-introduction site. Particular attention was given to surveillance patrols in areas used by threatened species, particularly peregrine falcons and caribou, to minimize illegal activities.

To control negative impacts of human activity on sensitive species, a Wildlife Control Zone was established in conjunction with intercept feeding sites along Highway 40 during the Winter Olympics in 1988. Similarly, activity of bighorn sheep on Mount Allan was monitored and bait sites were used to draw the sheep away from areas developed for Olympic ski events.

Two other initiatives, the Wild West and Prairie for Tomorrow programs, were also actively promoted this year. These two programs are joint ventures with the World Wildlife Fund aimed at securing diminishing prairie habitats and species.

The Fish and Wildlife Division has also been busy managing the commercial uses of our fish and wildlife. We promote such commercial use so long as it does not interfere with long-term interest and management of the resources. New fisheries management plans were developed for Lesser Slave Lake and Utikuma Lake. The Division continued to support research and development of humane trapping systems and promoted the "livelihood" concept for registered fur management areas. The Trapper Compensation Program was reviewed and summarized.

All of the division's various branches were active in working toward these objectives in 1987-88. A number of new programs and initiatives were introduced, successful established programs were continued, and achievements in a number of critical areas were made.

In the *Fisheries Management Branch*, there was a major change in the sport fishery management strategy, particularly for the east slope trout streams. The alternate-year fishing closure was eliminated on many streams, replaced by spring fishing closures, size limits on rainbow and cutthroat trout and arctic grayling, and restrictions on the use of bait. There was a reduction in the possession limit on all species from two daily limits to one.

The Angling Licence was changed to the Sport Fishing Licence and incorporated the Spearfishing and Bow Fishing Licence, which is no longer a separate licence.

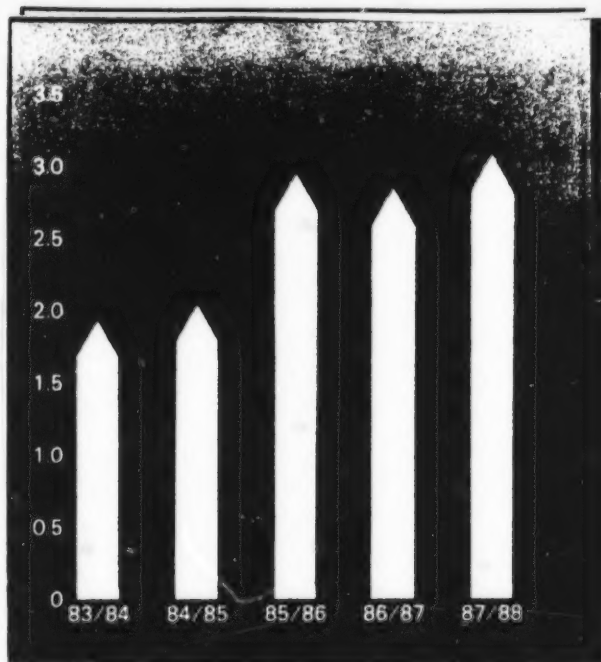
As well, a new commercial fishing licencing system was implemented on April 1. During 1987-88, 2 380 commercial anglers exercised their eligibility to purchase commercial fishing licences and commercial fishing lake licences. A total of 356 applications for transfer of commercial fishing privileges were processed.

The 1987-88 commercial harvest was 2 841 tonnes (round weight), with a landed value of \$3.1 million. The harvest was 100 tonnes lower than the 1986-87 harvest, though its landed value was \$200,000 higher than the previous year's (Figure 1).

The Cold Lake Fish Hatchery was officially opened, and, along with the four other provincial hatcheries, greatly increased the ability of the Division to produce fry and fingerlings for stocking lakes and streams. A total of 21.2 million fish were stocked in Alberta lakes in 1987-88 (Figure 2). The Cold Lake hatchery ran a successful walleye and lake trout stocking program before it was infected by a viral fish disease late in the year. The station was temporarily closed and completely disinfected. By March 1988, the hatchery was again rearing trout and was made ready to receive walleye eggs.

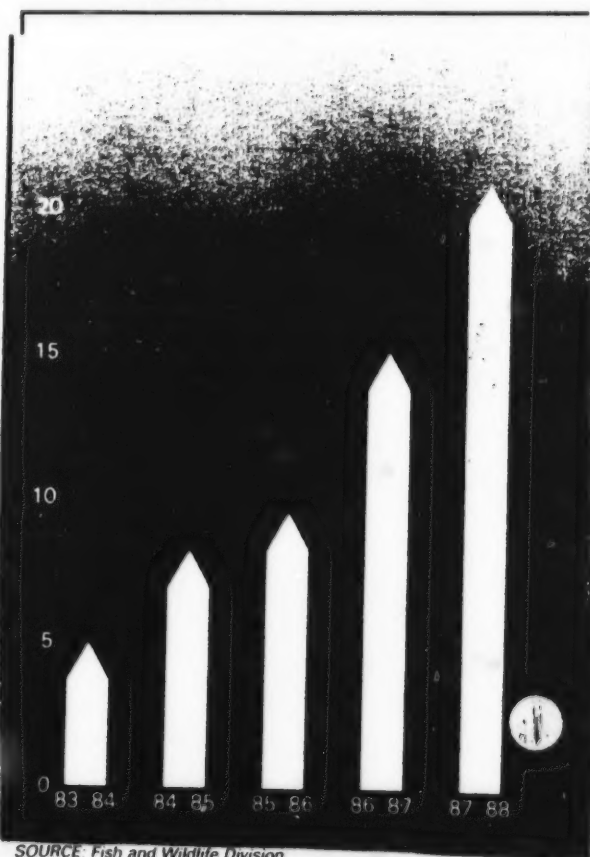
Surveys to determine population status of bull trout, golden trout, and lake sturgeon, were conducted, and measures to protect habitat for these species were undertaken. Creel census was done on a variety of lakes and streams to assess other fish populations; particular attention was given to trout populations in the Bow River. To

Figure 1 - Commercial Fish Production (Million \$)



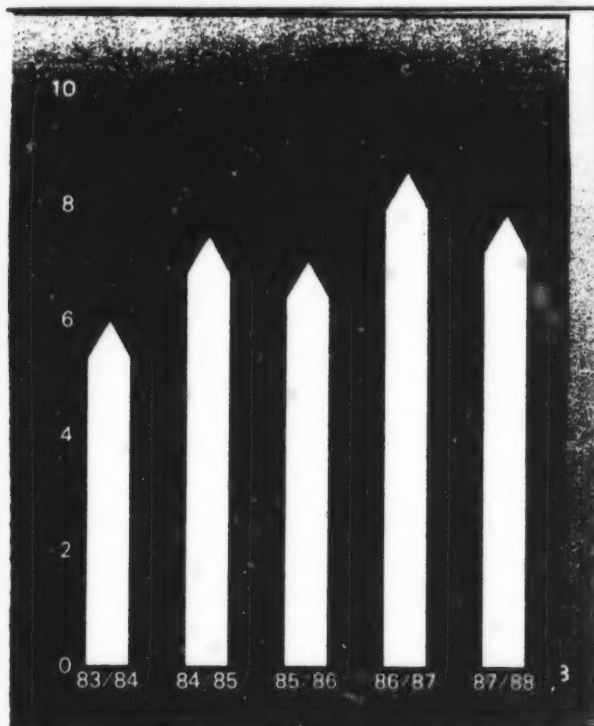
SOURCE: Fish and Wildlife Division

Figure 2 - Number of Fish Stocked (Million)



SOURCE: Fish and Wildlife Division

**Figure 3 - Wild Fur Production
(Million \$)**



SOURCE: Fish and Wildlife Division

maintain a scarce species, a transfer was made of 63 stranded bull trout from the Wildhay River to the Sulphur River.

The *Wildlife Management Branch* was also active in 1987-88. Development of detailed species management plans continued for elk, bighorn sheep, moose, caribou, antelope, white-tailed deer, wolf, grizzly bear, waterfowl, sharp-tailed grouse and pheasants. The mule deer species management plan was completed.

In conjunction with the initiation of a grizzly bear management plan, the limited spring grizzly bear authorization hunt was tried on a province-wide basis for the first time.

The annual harvest survey of Alberta's big game and bird game hunters was conducted at the end of the 1987 hunting season. The telephone poll was organized by the division, with calls made by members of 108 cooperating recreation and service clubs from across the province. In all 826 volunteers contacted 63 104 hunters and approximately 70 000 questionnaires were completed, 40% more than in the previous year. The survey provides important data on hunters, harvests, and hunter effort and success, all essential for management of game species.

The state of Alberta's waterfowl remained a pressing concern in 1987-88. Breeding populations of ducks showed some improvement this year, but still remained far below average with mallards down 18% from the 10-year average, pintails down 65%, and canvasbacks down 34%. Total ducks were down 28%.

A heavy spring snowfall in the western portion of southern Alberta, although disruptive to some early nesting ducks, did improve water and pond conditions significantly. Production of broods in 1987 was up 80% from the extremely low levels of 1986, but still remained 19% below the 10-year average and 50% below the long-term average. With no major recovery of duck population numbers, Alberta joined other Canadian and U.S. jurisdictions in continuing restrictive hunting regulations designed to reduce the mallard harvest by 25%.

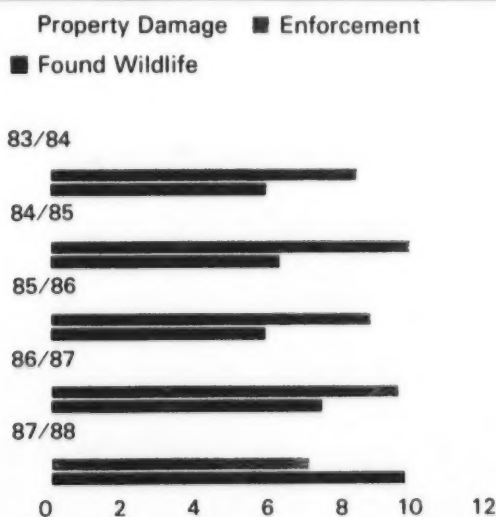
Commitment to the North American Waterfowl Management Plan was strengthened in Alberta. As part of the Plan, a First Step Project pilot area was selected. This 528-square-mile area of the knob and kettle terrain around Buffalo Lake will become a major focus for implementing the Plan. Planning was initiated for agricultural land-based programs that will improve habitat conditions for the production of waterfowl.

In preparation for the North American plan, a waterfowl recruitment study continued in the Stettler, Meeting Creek, and Kitscoty areas of Alberta. This study examines local levels of waterfowl productivity and determines factors that suppress nesting success. On another waterfowl-related front, Alberta continued the operation of the federal-provincial cost-shared Waterfowl Crop Damage Prevention Program. Damage control activities were practiced in 43 damage control areas encompassing 308 townships of cropland where waterfowl damage to unharvested crops has historically been severe and recurrent.

On other fronts, the Brooks Wildlife Centre enjoyed another successful year, hatching 113 142 pheasant chicks, down slightly from the previous year. More-intensive furbearer management, including a quota system for lynx, was implemented. This approach is based on close consultation with trappers and trapper organizations. Fur values declined considerably (27%), with coyote, beaver, fisher and lynx furs declining, though marten pelts increased slightly. Harvest records also show declines in beaver (20%), fisher (30%), lynx (28%), and coyote, though harvests increased for marten (13%), muskrat (23%), red fox (30%), and mink (66%). The decline in lynx production was due to a one-lynx quota per registered area in two fur management zones, and a complete closure throughout the remainder of the province. Marten production reached an all-time record of 20 273 pelts.

Fur production records for 1987-88 indicate that 8 670 registered or resident fur management licence holders generated a total value of \$7.6 million gained from fur and fur-bearing animals (Figure 3). Most of that total came from the pelts of marten (\$2.1 million), beaver (\$1.9 million), coyote

Figure 4 - Occurrences (Thousands)



SOURCE: Fish and Wildlife Division

(\$1.4 million), and muskrat (\$0.7 million).

Monitoring of the peregrine falcon population by the Division and by Wood Buffalo National Park continued in northeastern Alberta. Seven breeding pairs were located and eight captive-reared peregrines from the Canadian Wildlife Service facility at Wainwright were added to three nests. All 24 young fledged successfully. The Calgary and Edmonton AGT falcons returned to their respective homes but failed to hatch their own eggs. The Edmonton pair successfully fledged two young from Wainwright, but the Calgary pair did not fledge any young.

Commercial fishing and tourist lodge capabilities were assessed in the Peace River Region, along with the development of a self-creeper survey program at two commercial lodges. Regions provided extensive input into trapping and commercial fishing regulations.

The Fish and Wildlife Division's **Habitat Branch** was busy during 1987-88 operating its many programs. The Buck For Wildlife program expended \$3 265 000 to implement 278 fishery and wildlife habitat enhancement projects throughout the province. Many of these projects were cooperative ventures undertaken by volunteers, private organizations, the business community, and other government agencies. Thanks to these efforts, over 1 236 hectares of fisheries habitat and 11 000 hectares of wildlife habitat were protected and enhanced.

As part of the Wetlands For Tomorrow initiative, land acquisition proceedings continued on two projects: the Whitford-Rush lakes project in the Andrew-Willingdon area, and the Big Hay-Bittern lakes project near Camrose. Work is also being carried out on the Kleskun Lake project in the Grande Prairie area. These projects will greatly enhance waterfowl production when completed.

This was the second year of the Landowner Habitat Retention Program in the Counties of Minburn and Red Deer and in the Bow River and Eastern Irrigation districts. To date, approximately 8 500 hectares of wildlife habitat have been secured through this program.

The **Enforcement Branch** of the division continued to provide a high level of public service in 1987-88. Though the number of publicly identified occurrences received and acted upon at the district level leveled off during the year, the number of violations detected by officer staff increased by about 400 (Figures 4 and 5). The Outdoor Observer line experienced increased popularity during the year (Figure 6); perhaps more importantly, the quality of information received has improved considerably, resulting in a 23.4% apprehension rate for reports of violations in progress.

Enforcement staff spent 1 420 hours conducting inspection of commercial establishments dealing in either wildlife or fish products, 5 400 hours supervising various aspects of the fur industry, and 8 500 hours supervising or monitoring commercial fishery activities.

The **Operations Branch** is responsible for the coordination of five regional offices and 62 district offices to ensure consistent implementation of policies, programs, and procedures relating to resource management at the field level. The branch also provides special investigations, forensic science capability, specialized training of field staff, native liaison and problem wildlife programs.

Under the Fish and Wildlife Trust Fund - Wildlife Support Program, over 51 claims were processed for shot livestock in 1987-88, with 32 claims paid at a total cost of \$24 289. A total of 19 claims were rejected, with none left pending.

The Fish and Wildlife **Program Support Branch** is responsible for policy and program coordination as well as evaluation of administrative and financial guidelines within the division. The Branch is also responsible for the administration of the division's licencing program, including all recreational, commercial, and domestic licencing.

In 1987-88, a new licencing system was developed in accordance with the new Wildlife Act and Regulations. The new system required the development or revision of 45 different licences and forms. License

Figure 5

The number of violations that were detected by Officer staff increased from 8459 in 1986/87 to 8855 in 1987/88. These violations were dealt with in the following manner:

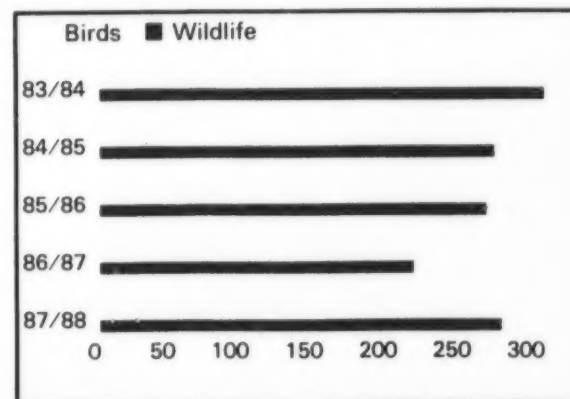
	1986/87	1987/88
Prosecutions	6252	5514
Warnings	2207	3341
Total	8459	8855

Figure 6

The Outdoor Observer 1-800 line has experienced increasing popularity since its inception in 1985. The breakdown of calls received on this line are as follows:

Subject	1986/87	1987/88
Illegal Hunting & Fishing	990	1393
Injured & Found Wildlife	361	655
Nonapplicable Calls	1528	2067
Unknown (Wrong Number)	258	361
Total	3164	4470

Figure 7 - Big Game and Bird Game Licence Sales (Thousand Licences)



SOURCE: Fish and Wildlife Division

sales for the year remained strong with 361 672 being sold: 270 277 big game and 92 781 bird game (Figure 7). Recreational licence fees were increased an average of 10% and a major review of the Licence Vendor Appointment Policy was undertaken.

In the branch's educational services area, the First Time Hunter Test became mandatory on April 1, 1987. Of the 3 000 potential hunters tested, 60% passed and the balance was encouraged to enroll in the Conservation and Hunter Education Program.

Individuals whose hunting privileges have been suspended by court order must pass an exam before obtaining a new licence. This year, 400 candidates passed the violators' test. Almost 3 000 people have taken this test since the program began in 1981.

The Resource Economics and Assessment Section continued its involvement in the 1987 National Survey of Importance of Wildlife to Canadians. The questionnaire was administered to sampled households across Canada in February 1988. Final results were tabulated this year, and a series of analyses are scheduled for

production in 1988-89. The previous survey, from 1981, proved to be one of the most valuable sources of socioeconomic data on the recreational use of wildlife. The new survey will update this data base and allow analysis of trends or changes in socioeconomic variables during the 6-year interval between surveys.

Our relationship with resource users and the larger general public is extremely important to us. Through representation at numerous public meetings and other community functions to the operation of several public-involvement programs, the Fish and Wildlife Division has maintained a high profile across the province.

The Division developed and conducted a variety of organized public information programs, including Trapper Education, Conservation and Hunter Education, and Fishing Education. Approximately 12 000 students successfully completed the Conservation and Hunter Education course. In 1987-88, a total of 25 Project Wild workshops were promoted and aimed specifically at increasing awareness of fish and wildlife resources among school-aged children. ▲

PUBLIC LANDS DIVISION

The Public Lands Division is responsible for the management of public lands as defined in the Public Lands Act.

A major function of the division is to determine the suitability of public lands for various purposes. Some are leased for grazing, cultivation, recreational, commercial, or industrial uses. Suitable lands may be sold for farms, subdivisions, or plant sites. Grazing reserves are developed on some public lands for livestock grazing. Other lands are reserved for the use of other departments and agencies.

In November 1987, the branches that formed the **Resource Evaluation and Planning Division** were reallocated to other divisions in the department. The **Resource Planning Branch** became a branch of the Public Lands Division, with a portion of the staff assigned to the newly created Policy Secretariat. The functions of the branch have not changed with this new organization. The branch continues to provide planning and coordination services through an integrated resource management approach of the province's public lands and resources.

Also during 1987-88, the Public Lands Division assumed responsibility for the **Foreign Ownership of Land and Land Agents Licencing Administration**.

The total area of Alberta is 661 185 square kilometres, or about 66 million hectares. About 62% of this total is under provincial control, and more than 60% of all lands, largely the forested regions, is not settled (Figure 8).

A significant portion of Crown land in Alberta has been designated with protected status for conservation, recreation, ecological, and other purposes (Figure 9).

Of the public lands under disposition under Public Lands Division management (4.6% of the province), 0.27 million hectares are under disposition leading to title. About 2.8 million hectares are under disposition not leading to title (lease, permit, or licence) and include 2.24 million hectares of

grazing leases and permits. Disposition activity on public lands increased during the fiscal year relating to applications received, dispositions and letters of authority issued, and dispositions in effect (Figure 10).

A major responsibility of the division is to respond to applications for public land dispositions. In 1987-88, there was a significant increase of almost 50% in the number of applications processed relating to **Oil and Gas Development**. Mineral Surface Lease applications increased by 80% to 2 484 from the previous year's 1 375. The increases for Licences of Occupation (28%) and Pipeline Agreements (31%), while not as great, were also significant.

Seven applications for coal or oil sands exploration on public land were received, the same as the previous year. The number of dispositions in effect as of March 31, 1988, relating to oil and gas activity increased by 9% to 46 905. Non-industrial activity decreased in 1987-88. Miscellaneous Lease applications, for example, decreased by 30%.

Interest in **wild rice** growing stabilized in 1987. There are about 400 lakes in operation, which represent an actual decrease in the number of lakes in comparison to the previous year. A number of wild rice authorizations were cancelled on lakes found to be unsuitable for wild rice growth.

The total number of grazing applications decreased by about 21% in 1987-88. Approximately 2.2 million hectares continue to be held under grazing dispositions.

The total acreage under **Farm Development** sale or lease with option to purchase decreased by 4.8% to about 197 000 hectares. Acreage under Farm Development lease, however, increased by 4.6% to 53 000 hectares.

The number and acreage of homestead sale dispositions continued to decrease because of the elimination of homestead sale provisions in the Public Lands Act in 1984.



Figure 8

Status of Lands in Alberta
March 31, 1988

	AREA		PERCENTAGE OF ALBERTA
	SQUARE KILOMETRES	SQUARE MILES	
Privately Owned Land	184 915	71 396	28.0
Public Lands			
- Under Disposition Leading to Title	2 657	1 026	0.4
- Under Disposition Not Leading to Title ^a	27 990	10 807	4.2
- Special Areas ^a	12 046	4 651	1.8
Provincial Parks, Wilderness Areas	2 334	901	0.4
Willmore Park, Natural Areas, Ecological Reserves	5 175	1 998	0.8
Metis Settlements	5 053	1 951	0.8
Indian Reserves	6 566	2 535	1.0
Non-Settled Public Lands			
- Forested lands Within the Green Area ^b	276 232	106 654	41.8
- Forest Management Agreement Areas and Provisional Reserve	57 158	22 069	8.6
Vacant Public Land (within White Area) ^c	17 936	6 925	2.7
Federally Controlled Lands (National Parks, Research stations, Department of National Defense, etc.)	63 123	24 372	9.5
TOTAL AREA OF ALBERTA	661 185	255 285	100.0
Land	644 389	248 800	97.5
Water	16 796	6 485	2.5

SOURCE: Public Lands Division

^aIncludes some tax recovery lands

^bGreen Area: Forested lands withdrawn from settlement, managed for forestry and other multiple uses.

^cWhite Area: The settled area of the province including the settled area of the Peace River Region. Public lands in this area are managed for multiple use, including agricultural uses, pursuant to the Public Lands Act and Regulations.

The Public Lands Division is also involved in the management of several ongoing programs. The **Range Improvement Program** provides assistance on a cost-shared basis to farmers holding grazing dispositions in the White and Green areas of the province. The purpose of the program is to assist livestock producers in maintaining and increasing the carrying capacity of grazing leases, permits, and

licenses. Improvements are developed on a planned basis that recognizes the sustained yield of the native and tame forage resource. Each plan incorporates the importance of other multiple uses such as wildlife, forestry, and recreation. Projects undertaken on grazing leases include clearing, forage establishment, crossfencing, dugouts, trail development, and brush control management.

In 1987-88, the Range Improvement Program funded 975 ongoing projects and approved 186 applications for funding. The amount expended on these projects was \$2.3 million. As of March 31, 1988, 495 Range Improvement Agreements, generally consisting of several range development projects, have been completed since the beginning of the program. These completed agreements between the grazing disposition holder and the Department have provided increased forage or were used to offset declines in carrying capacities from brush encroachment.

The **Grazing Reserve Program** provides summer pasture for the livestock of small-scale farmers and ranchers whose privately owned lands are thus freed for crop and hay production. The program helps to diversify and stabilize the agricultural industry in the province. There are 32 grazing reserves covering 0.29 million hectares. In 1987, the 32 reserves accommodated 282 746 animal unit months of livestock grazing, equivalent to 76 942 mature head of livestock. A total of 1 670 patrons benefited from the program. Active development of grazing reserves continued during 1987-88 and included burning, breaking, working down, seeding, fertilizing and fencing. These development activities involved contracts totaling \$3.79 million, \$2.98 million of which was funded by the Alberta Heritage Savings Trust Fund.

In 1987-88, as part of the division's involvement in Wildlife '87, the **Natural Areas Program** began a major effort to expand its efforts through public involvement and establishment of new sites. Twenty-one new natural areas were established and additions were made to three existing ones under the Wilderness Areas, Ecological Reserves and Natural Areas Act.

Through funding from the Alberta Heritage Savings Trust Fund, six contracts for a total of \$62 230 were awarded in 1987-88 to reclaim gravel pits and to remove debris and garbage from public lands. Other projects totaling \$45 186 involved fence construction and erosion control and were completed with financing from the divisional budget.

In 1987-88, two contracts were issued to private consulting firms to conduct detailed soil evaluations as part of the Department's agricultural capability inventory. Totals of 23 893 hectares in the Peace River region and 18 228 hectares in the Northeast region were completed.

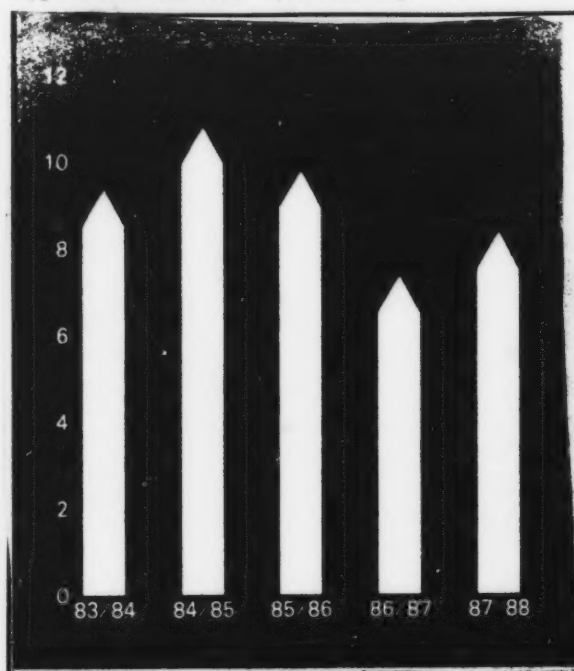
Legal surveys were completed on 19 sections of public lands in the Peace River region for agricultural expansion.

The **Foreign Ownership of Land Administration** enforces the Foreign Ownership of Land Regulations, which control and restrict the acquisition by foreigners of privately owned agricultural and recreational land in

the province (Figure 11). Another major responsibility is the administration of the Land Agents Licensing Act and Regulations, under which all land agents in the province are licenced and regulated. Land agents acquire from landowners the surface interests in land required for mining operations, oil and gas well sites, power transmission lines, pipelines, and related purposes (Figure 12).

During the report period, the Resource Planning Branch through the **Integrated Resource Planning Program** was active in 24 plans and three studies. These included four regional plans, 12 sub-regional plans, and eight local plans. The new plans initiated during the year were Wandering River,

Figure 10 - Activity on Public Lands Applications Received - (Thousands)



SOURCE: Public Lands Division

Figure 9

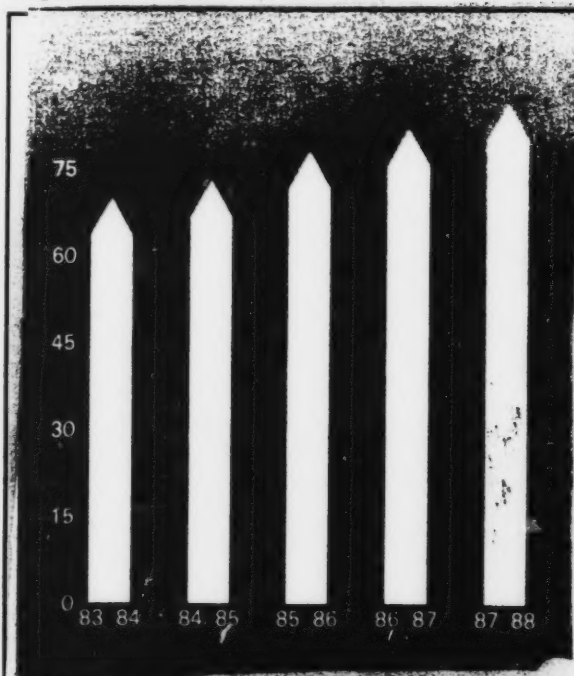
Crown Lands with Protected Status in Alberta

	Area (km ²)	% of Alberta	
Under Legislation			
National Parks	54 084		
Provincial Parks	1 258		
Natural Areas	400		
Forest Land Use Zones	5 643		
Provincial Recreation Areas	34		
Willmore Wilderness Park	4 597		
Wilderness Areas	1 010		
Bird and Wildlife Sanctuaries	693		
Forest Recreation Areas	1 214		
Ecological Reserves	178		
Total	69 111	10.45	
Under Protective Reservation			
Ecological Reserves	419		
Natural Areas	636		
Recreation Areas and Proposed Provincial Parks	561		
Total	1 616	0.24	
Under Military Reservation	Total	8 517	1.29
Under Protective Zoning			
Eastern Slopes			
Prime Protection Zoning	12 977		
Critical Wildlife Zoning	6 524		
Within Integrated Resource Plans outside the Eastern Slopes	3 781		
Total	23 282	3.52	

A total of 10.69% of Alberta is protected, within 10.45% of the province protected under legislation and 0.24% under protective reservation. In addition, significant portions of the 3.52% of the province which is under protective zoning and the 1.29% of the province within military reserves do not overlap with other protective designations and could be added to the total.

Source: Resource Planning Branch
(As of March 31, 1988)

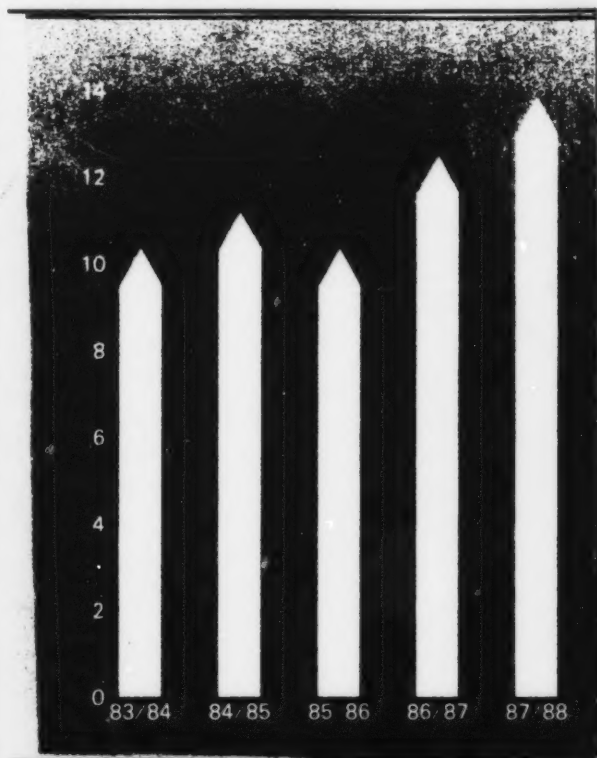
Dispositions in Effect - (Thousands)



SOURCE: Public Lands Division

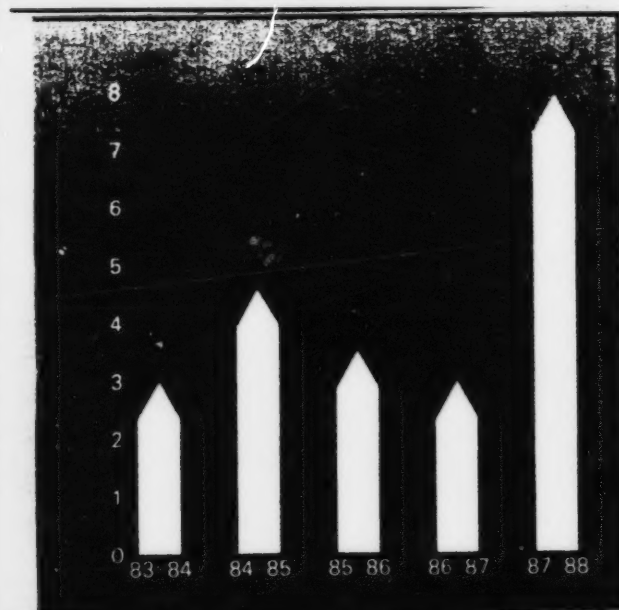
Figure 10

Dispositions and Letters - of Authority Issued
(Thousands)



SOURCE: Public Lands Division

Figure 11 - Controlled Land Acquired
by Foreigners (Thousand Hectares)



SOURCE: Foreign Ownership of Land Administration

Note:
"Controlled land" is defined in the Foreign Ownership of Land Regulations as any land outside the boundaries of a city, town, village or summer village. It does not include Crown land or minerals. "Foreigners" include ineligible persons and foreign-controlled corporations as defined in the regulations

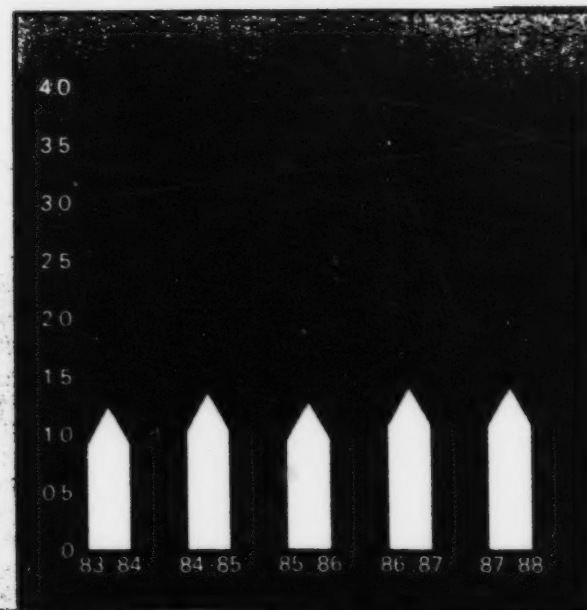
Athabasca River Sandhills, Yellowhead North, David Thompson Corridor, Bow River Corridor, Crowsnest Corridor, and the Lower Peace River Valley Corridor Recreational Plan.

Three sub-regional plans — Livingstone-Porcupine Hills, Sturgeon Lake-Puskwaskau East, and Keg River — were approved by Cabinet. The Smoky-Peace Point Local Plan, the Recreation Sites in the Upper Peace Valley Report, and the Bow River Economic Study were approved by the Minister of Forestry, Lands and Wildlife. There are now 15 completed plans at the sub-regional and local levels.

As part of the planning projects, there was significant activity in the **Public Involvement Program**, including more than 15 formal public events and many more informal meetings with public groups and municipal authorities. The Alberta Integrated Planning Advisory Committee continued to meet and provide advice to the Minister on all aspects of the planning program. A key workshop was held in July.

The Branch also continued to provide coordination services for the department in interdepartmental referrals such as preliminary disclosures and local government studies and plans. It also participated in the coordination services role involved in hosting the three-day conference for the Canada Committee on Land Use in September 1987. ▲

Figure 12 - Active Land Agent Licenses
(Thousand Licenses)



SOURCE: Foreign Ownership of Land Administration

Note:
Effective April 21, 1982, all new applicants for a licence are first issued an interim licence which they hold for a 12-month period under the supervision of a licenced land agent. After a satisfactory supervision period, and upon successful completion of the land agent examination, a land agent licence is issued

FOREST INDUSTRY DEVELOPMENT DIVISION

The Forest Industry Development Division was created in 1986 to assist new and existing forest products or forest based companies and private investors in utilizing Alberta's forest resources for a variety of forest

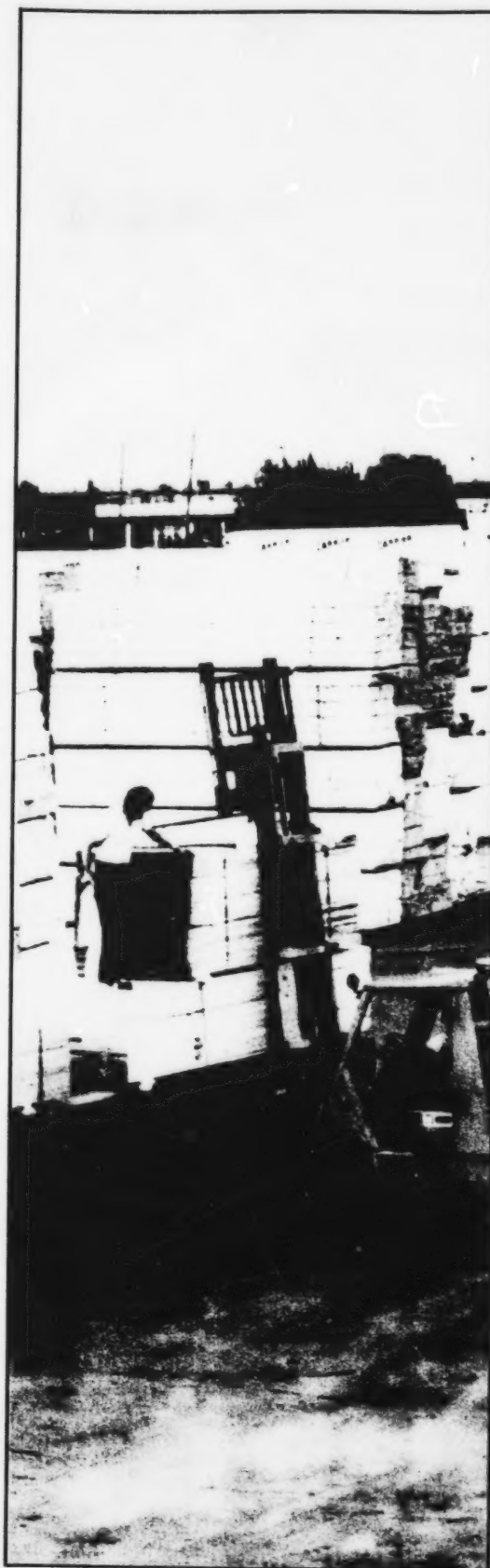
products; to expand Alberta's forest product export markets; and to attract investment and private sector involvement in developing all renewable forest resources.

Figure 13 - Committed Projects

Company	Location	Project Description	Estimated Capital	Estimated Jobs	
			Cost (\$MM)	Direct	Indirect
Completed (1986-1988)					
Primary Products					
Pelican Spruce Mills Ltd.	Drayton Valley	Built OSB plant	55.0	350	525
Weldwood of Canada Ltd.	Slave Lake	Converted waferboard plant to OSB	7.0	123*	185*
Mostowich Lumber Ltd.	Fox Creek	Built sawmill	8.0	40	60
Blue Ridge Lumber Ltd.	Blue Ridge	Built a MDF plant	32.0	60	90
Blue Ridge Lumber Ltd.	Blue Ridge	Expanded sawmill	4.0	53	85
Sunpine Forest Products Ltd.	Sundre	Purchased sawmill and constructed a wood preserving plant	9.5	80	142
Atlas Lumber (Alberta) Ltd.	Sentinel	Purchased, upgraded and operated a sawmill	2.4	75	125
Pelican Spruce Mills Ltd.	Drayton Valley	Built sawmill	30.0	100	160
Millar Western Pulp Ltd.**	Whitcourt	Built CTM pulp mill	204.5	191	382
Secondary Products					
Jager Industries Inc.	Calgary	Modernized wooden I-beam facility	1.0	10	20
Totals			353.4	1082	1774

* Jobs retained

** Completed July 1988



The major objectives of the division are to:

- increase employment opportunities through new developments and expansions;
- improve the competitiveness of the Alberta forest products industry;

- encourage and facilitate forest products research and development in Alberta;
- identify equity funding and other forms of financial assistance that could be available to a development proposal; and

- assist the primary and secondary forest products industry and the renewable resource industry in diversifying Alberta's markets through cooperative efforts with the Department of Economic Development and Trade and other related departments and agencies.

Figure 13 - Committed Projects (continued)

Company	Location	Project Description	Estimated Capital Cost (\$MM)	Estimated Jobs	
			Direct	Indirect	
Underway					
Primary Products					
Weldwood of Canada Ltd.	Hinton	Double kraft pulp mill capacity	393.0	370	740
Grande Cache Forest Products Ltd.	Grande Cache	Modernize sawmill	5.0	390*	640*
Daishowa Canada Co. Ltd.	Peace River	Build pulp mill	500.0	630	1260
Alberta Newsprint Company Ltd.	Whitecourt	Build newsprint mill	360.0	375	750
Procter & Gamble Cellulose Ltd.	Grande Prairie	Modify pulp mill to produce aspen pulp	10.1	—	—
Total			1268.1	1765	3390

Totals For Projects Committed or Underway

New Capital Expenditures	\$1621.5 million
Direct Jobs Created/Retained	2847
Indirect Jobs Created/Retained	5164

* Jobs retained

Figure 14 - Projects Under Consideration

Type of Project	Estimated Cost (\$MM)	Estimated Jobs	
		Direct	Indirect
2 Sawmills	38	210	370
5 Pulp or pulp and paper mills (Some of which are competing)	2600	2985	5970
1 Reman Facility	3	145	215
1 Chopstick	2	105	155
Totals	2643	3445	6710

The activities and accomplishments of the Forest Industry Development Division are summarized in Figures 13 and 14.

The primary research activity of the Forest Products Research Branch was funded under the B4 Subprogram of the Canada-Alberta Forest Research Development Agreement.

Figure 15 - Current Research Projects with Industry

Company	Project Description
Morrison-Knudsen Forest Products Co. Ltd. and Jager Industries Ltd.	The commercial use of maxi-chips from Alberta wood species for the manufacture of oriented strandboard.
Zeidler Forest Ind. Ltd., Ligna Technologies Ltd. and D.G. Bell & Associates Ltd.	Technical and economic feasibility of producing cement and gypsum bonded particleboard in Alberta.
Canpolar Inc.	Use of impulse radar technique for detection of decay in trees.
Aspen Mills Ltd. and Focal Enterprise Inc.	Untreated shingles and shakes from Alberta aspen.
Crestbrook Forest Industries Ltd.	Identification of modernization and/or expansion opportunities for the plywood plant.
Pelican Spruce Mills Ltd.	Development of engineering property values for oriented strandboard to increase its market potential in commercial wood construction applications.
The Cabinet Maker and Silvacom Ltd.	Children's furniture manufacturing from Alberta aspen, pine and spruce.
Jasper Millworks Ltd. and Woodlands Resource Services Ltd.	Birch supply, lumber potential and cost for furniture in Alberta.
Alberta Pallet Co. Ltd.	Development of special pallets for the automobile industry based on Alberta panel products and low grade hardwood.
Tek Woodworks Ltd.	Design, develop and fabricate a prototype of children's furniture from MDF using laser technology.
Canadian Forest Products	Feasibility of manufacturing value-added products using conventional plywood technology.
Walls and Forms International Ltd. and N.R. Miller Consulting	Market opportunities for secondary wood panel products produced in Alberta.
Weldwood of Canada Ltd., Pelican Spruce Mills Ltd. and Forintek Canada Corp.	Status of black poplar utilization in the production of waferboard and oriented strandboard.
Recom Engineering Ltd., Pelican Spruce Mills Ltd. and Blue Ridge Lumber Ltd.	Development of on-line quality control system for Alberta panel products.
Zeidler Forest Industries Ltd., Borden Chemicals Ltd. and Forintek Canada Corp.	Development of fast curing adhesives for plywood.
Aspen Mills Ltd. and Silvacom Ltd.	Treated shingles and shakes from Alberta jack pine and aspen.
Tonan Commerce Ltd.	Demand for disposable aspen chopsticks.
Treetop Associates	Market opportunities for corrugated wood structural panels.

The mandate of **Forest Products Research** is:

- to enhance the (value and volume) utilization of Alberta's forest resources;
- to assist the existing forest products industry in achieving its full potential in all economically available markets;
- to assist new forest industry development in the province; and
- to keep Alberta on the leading edge of product technology and development suited to Alberta's forest resources.

The accomplishments and current activities for this branch are listed in Figures 15, 16 and 17.

Figure 15 - Current Research Projects with Industry (cont'd.)

Company	Project Description
Stake Technology Ltd.	Characteristics of steam exploded pulp from Alberta aspen.
Arbokem Inc.	Laboratory evaluation of explosion processed aspen pulp.
Pelican Spruce Mills Ltd. and Georgia Pacific Ltd.	Evaluation of lignin from steam exploded aspen as an extender in phenol formaldehyde resins.
K.C. Shen Technology International Ltd.	Determine feasibility of producing a resin from biomass residues using steam treatment.
Alberta Energy Co. Ltd.	Feasibility of binderless MDF process.
Brown Engineering Ltd.	Use of Alberta softwood lumber in P.W.F.

Figure 16 - Current Strategic Projects

Organization	Project Description
Sandwell Swan Wooster Inc.	Assessment of newsprint opportunities in Alberta.
Ekono Consultants	Business opportunity and market assessment of value-added paper manufacturing in Alberta.
Econotech Services Ltd.	Preparation of pulps from Alberta aspen and balsam poplar by various processes.
Econotech Services Ltd.	CTMP from various blends of aspen, spruce and pine wood furnishes.
Economic Development and Trade	Directory of Secondary Wood-Using Industries in Alberta
University of Alberta	Wood quality of Alberta aspen and black poplar.
University of Alberta	Pacific Rim markets for forest products in the 1990's.
University of Alberta	Wood density of some of Alberta's commercial wood species.
University of Toronto	The biodeterioration and preservative treatment of waferboard/OSB.
Virginia Polytechnic Institute and State University	Modification of lignin.
Virginia Polytechnic Institute and State University	Grading of Alberta hardwoods and softwoods for furniture applications.
Virginia Polytechnic Institute and State University	Utilization and marketing opportunities for Alberta aspen solid wood products.
Forest Industry Development Division	Proceedings of the workshop on wood/plastic composites.
Alberta Research Council	Evaluation of Alberta kaolin for use as paper filler.
Forest Engineering Research Institute of Canada	Economic feasibility of satellite chipping yards in Alberta.
Woodbridge Reed & Associates	Offshore market opportunities for Alberta sawmills.

The **Renewable Resources Branch** was created to help facilitate renewable resource development.

Working in conjunction with provincial, national, and international tourism and recreation industries, the Renewable Resources Branch researches markets and identifies the development potential of Alberta's public lands and resources. This integrated approach ensures that all industry interests are considered. The coordination role includes liaison with other departments to clarify regulation requirements and expediting approvals.

The goals and objectives of this branch are as follows:

- Coordination - to provide assistance to proponents in the preparation, review and implementation of development proposals involving lands and resources.
- Research/Policy Development - to provide the necessary financial and personal support in the research, analysis and policy development of economic development opportunities available through public lands and resources.
- Promotion and Marketing - to improve the understanding and awareness of the development opportunities and subsequent economic diversification for public lands and resources.
- Communication - to ensure that appropriate information on program or project development is provided to the participant.

Figure 17 - Major Projects In The Forest Products Program At The Alberta Research Council

A) Products Development Laboratory

- Production cost saving and improved performance of oriented strandboard through process optimization.
- Use of isocyanate and fast curing phenolic binders in the production of panel products to increase durability at lower cost.
- Short and long-term performance of Alberta panel products in engineered building components - stress skin panel.
- Development of added value products from spruce plywood and oriented strandboard through UV-filling and embossing.
- Characterization of trembling aspen and black poplar with respect to potential end utilization.

NOTE: Funding for these projects was made available under the Canada/Alberta Forest Resource Development Agreement. Some private contract work was also carried out on a cost recovery basis from the industry.

B) Performance Evaluation and Testing Laboratory

The laboratory was involved in approximately 40 projects on cost recovery basis from the industry. These projects evaluated products such as glued-laminated timber, oriented strandboard, spruce plywood and various adhesives.

The following is a summary of present activities in the Renewable Resources Branch.

Renewable Resources Projects - Coordination

There are many projects that are in the coordination stage. These projects cover a wide array of forest development uses and range from major ski development on the Eastern Slopes to small recreation areas throughout the province. The Renewable Resources Branch provides a facilitator's role in working directly with the proponent and other government departments to see the project through all the necessary review and approval stages.

Research

At the present time, there are six projects receiving research funding. The focus of the research is the identification of commercial recreation development opportunities for public lands and resources. In addition to the currently funded projects, there are a number of projects still in the proposal stage.

Promotion and Marketing

In cooperation with Economic Development and Trade and Alberta Tourism, a profile of development opportunities in Alberta has been drafted. ▲



ALBERTA FOREST SERVICE DIVISION

The objective of the Alberta Forest Service (AFS) is to manage Alberta's forest lands to ensure a perpetual supply of benefits and products while maintaining a high-quality forest environment.

Forest lands cover 331 000 square kilometres, or 50% of the province. Of this total, 182 000 square kilometres are productive forest land and support 2.3 billion cubic metres of wood. An additional 20 000 square kilometres have the potential to produce forest products. The remaining areas of rock, muskeg and wetland are not considered capable of producing timber.

While the 1987 fire season did not experience the greatest number of fires or the largest area burned, it certainly was one of the longest fire seasons ever recorded in Alberta. Fires were reported and action taken every month of the year.

In 1987 spring weather conditions in the southern two-thirds of the forested areas were the driest since 1980. These regions received below-normal overwinter precipitation, periods of very above-normal temperatures, and extremely warm, dry winds.

July and August saw more normal conditions, but September witnessed a return to well-above-normal temperatures. These conditions prevailed over much of the province until freeze-up in December.

The dry ground conditions produced widespread hold-over fires from agricultural and industrial burning throughout the entire winter. These ground fires created hazardous smoke problems along Alberta highways, with numerous vehicle accidents, some involving fatalities.

The most significant outbreak of fires occurred in early May when six fires escaped and became major campaign fires. A large percentage of

area lost and suppression costs can be attributed to these fires. Another large fire, which started on Thanksgiving weekend in the mountains near Grande Cache, took considerable effort and resources to contain.

A total of 1 236 fires burned over an area of 36 250 hectares during the 1987 fire season. Forty-four per cent of the fires were caused by lightning and 56% by humans (Figures 18 and 19).

The Alberta Forest Service also carried out a program in detection, monitoring and management of insect and disease outbreaks in the province.

The population of the mountain pine beetle (MPB) is continuously declining in the province. Pheromone baits were used only in high-risk areas in the Canmore-Kananaskis Country area; however, all mature lodgepole pine stands in the eastern slopes were monitored for the MPB.

Significant increase in *spruce budworm* defoliation was detected in three forest regions in the province as outlined below.

Forest Region	Area of Defoliation
Footner Lake	60 000 ha Light-Severe
Grande Prairie	1 500 ha Moderate-Severe
Lac La Biche	300 ha Light-Moderate

Management of the spruce budworm population will be integrated into the forest management planning process.

Other species that caused concerns over the past year were spruce beetle and jack pine budworm, whose populations remained at an endemic level. The Alberta Forest Service will continuously monitor all forest insects and diseases in the province.

Timber harvested from provincial Crown lands totaled 8 333 899 cubic metres, an increase of 1.3% over 1986-87. The harvest is primarily used in the manufacture of pulp, lumber, and panel products. Sawlogs and peeler logs accounted for 94% while 5% was in pulpwood.

Coniferous and deciduous timber harvests were 7 444 595 cubic metres and 889 304 cubic metres — 89% and 11% of the total harvest — respectively (Figures 20 and 21). The province's forests also provided 36 055 Christmas trees and 14 090 transplants for the public.

A total of 33 997 timber dispositions were issued, a 16% decrease over the 40 631 issued in 1986-87. Only 147 of these would be considered major dispositions, the remainder being Local Timber Permits and Forest Product Permits (Figure 22).

The division's *Range Management Program* allows ranchers to use public lands for livestock grazing. In 1987-88, 204 499 animal unit months (AUMs) of grazing were provided in the Rocky Mountain Forest Reserve, and on 279 710 hectares in other parts of the Green Area. To maintain the current level of grazing, various range improvement projects were completed at a cost of \$377 437.

The Alberta Forest Service operated and maintained 206 *recreation areas* which provided 4 489 camping and 1 660 day-use units. In addition, the AFS maintained 837 km of trails for a number of recreation opportunities including snowmobiling, off-highway vehicle use, and cross-country skiing. Also available were thousands of kilometres of informal and non-maintained trails that were originally seismic lines, game trails, and traditional pack trails.

In July of 1987, the *Wild Kakwa Forest Land Use Zone* was designated as a *Wildland Recreation Area* in order to preserve the outstanding character of the Kakwa River and Falls region. The Wild Kakwa covers 647 square kilometres and is located 160 km southwest of Grande Prairie adjacent to the Alberta-B.C. border. Management of the Wild Kakwa Wildland Recreation Area will reflect the traditional uses of this region, but at the same time minimize any conflicts among users and the environment.

During 1987-88, lake management plans for Fawcett Lake and Lawrence Lake were initiated. These plans were intended to ensure that the most appropriate recreational use and any associated development occurs in an orderly manner.

The Alberta Forest Service is actively involved in the Department's *Natural Areas Program*, in the management of Natural Areas located in the Green Area. During 1987-88, seven natural areas were designated in the Green Area as part of Wildlife '87. These Natural Areas protect features that range from regional or provincial significance to national and international significance.

The Alberta Forest Service is also actively involved with the Department's joint administration and management of *Ecological Reserves* with Alberta Recreation and Parks Department. As part of Wildlife '87, eight Ecological Reserves were designated in the province. Seven of these sites are located in the Green Area and protect biophysical features representative of Alberta's natural regions or biological or geological features that are rare or unusual.

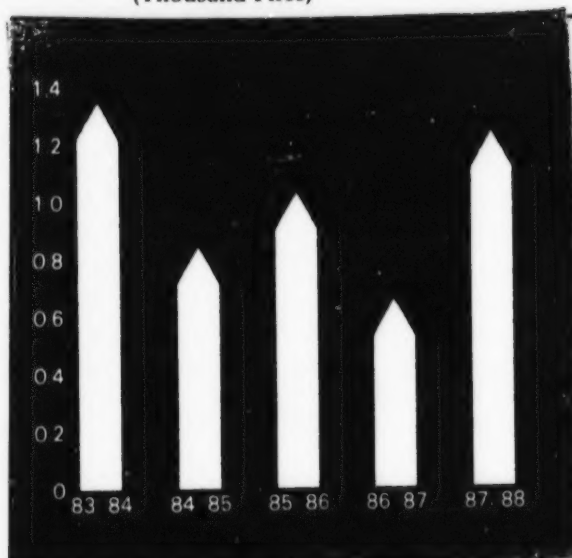
Natural Areas and Ecological Reserves form an integral part of Alberta's protected lands. Management plans will be developed to ensure the features of these areas and reserves are protected.

Research carried out by the *Forest Research Branch* addressed applied problems in forest management. Several projects were directed at forest regeneration and plantation establishment. The quality of bare-root planting stock was studied. Results showed that field performance can be affected by nursery cultural regimes, lifting schedules, and overwinter storage treatments.

To facilitate the increasing numbers of trees planted annually in Alberta, the Branch studied the possibility of extending the tree-planting season by planting "hot-lifted" stock throughout the summer and by planting trees in the fall.

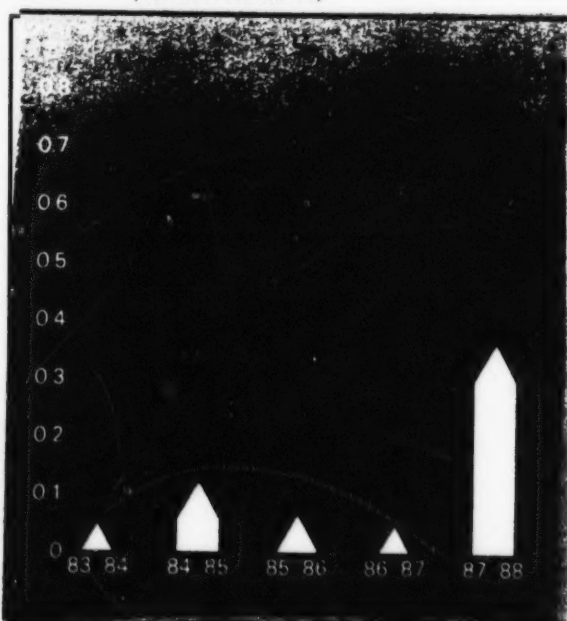
Various methods of improving plantations' success were studied. Optimizing microsite capacity by varying location of planted trees was shown to affect survival and growth of planted trees. Work continued toward improvement of tree growth through inoculation of planted seedlings with beneficial mycorrhizal fungi. Further work was undertaken using fear repellents to control browsing damage by hares. The cooperative Vegetation Management Project, funded by the

Figure 18 - Fire Incidence
(Thousand Fires)



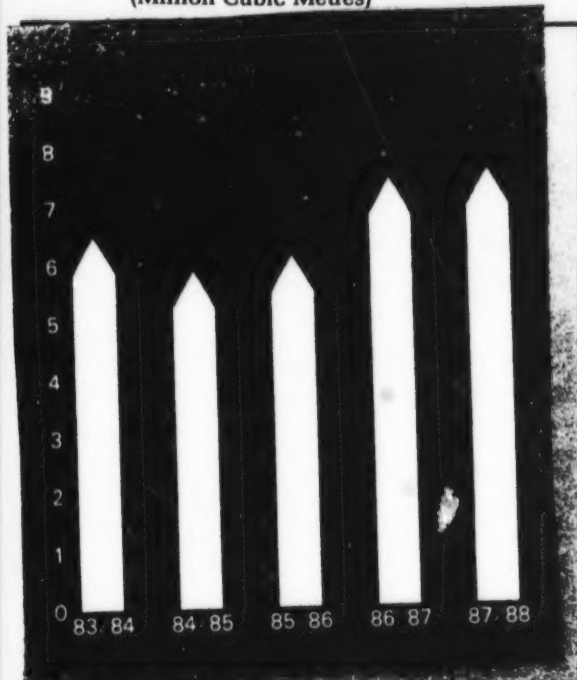
SOURCE: Alberta Forest Service

Figure 19 - Area Burned
(Million Hectares)



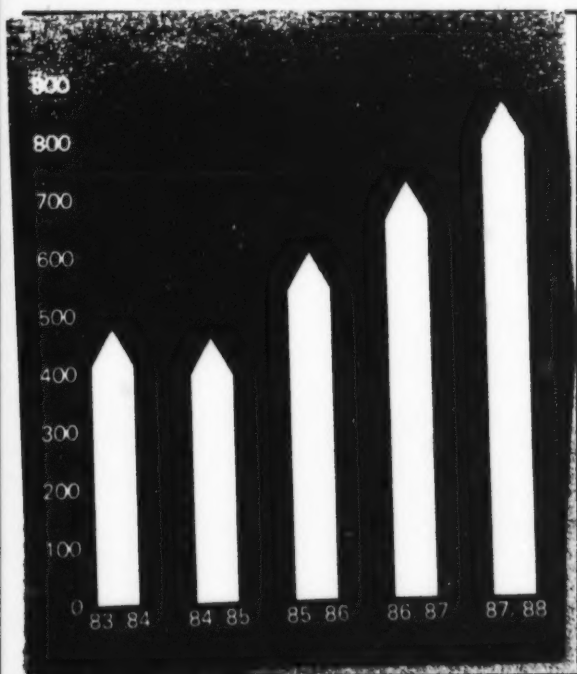
SOURCE: Alberta Forest Service

Figure 20 - Coniferous Timber Harvest
(Million Cubic Metres)



SOURCE: Alberta Forest Service

Figure 21 - Deciduous Timber Harvest
(Thousand Cubic Metres)



SOURCE: Alberta Forest Service

Canada-Alberta Forest Resource Development Agreement, continued investigations into the control of competition in plantations, and on the release of white spruce from competing aspen and other hardwood species.

The *Ecological Classification of the Bow/Crow and Rocky/Clearwater Forests* was continued. Emphasis was placed on development of an ecosystem identification field guide and on outlining forest management interpretations at the stand level. This work was augmented by research done by the Reforestation and Reclamation Branch on identification of zones within the province that share similar characteristics influencing success of reforestation.

The final report of the Tri-Creeks watershed study was written with input from cooperating branches. In addition, a field manual outlining watershed monitoring procedures was written. Monitoring of the growth dynamics of young managed stands was continued with funding from the Canada-Alberta Forest Resource Development Agreement. In support of ongoing in-house research projects, further work requiring expertise in specific fields was done under contract by universities and private consultants.

In the area of *reclamation*, forest drainage trials, aimed at improving coniferous tree growth on peatlands, resulted in construction of 52 kilometres of drainage ditches. This completed three operational trials that were funded under the Canada-Alberta Forest Resource Development Agreement. In addition, Alberta hosted a forest peatland drainage workshop designed to exchange drainage ideas and methodology. This highly successful conference and tour was attended by experts from across Canada, as well as from Finland and China.

Reforestation surveys carried out by AFS were completed on 17 030 hectares of cutover land. Results of surveys continue to show that 96% of harvested areas meet provincial reforestation standards by the tenth year after cutting. Silviculture treatments completed by the AFS included mechanical scarification of 6 904 hectares, seeding of 1 721 hectares, planting of 5 671 hectares (8 153 445 seedlings) and thinning of 92 hectares. Cone collection totaled 1 312 hectolitres of Pine and 1 376 hectolitres of Spruce.

The Canada-Alberta Forest Development Agreement funded the continued maintenance of areas developed under the Maintaining Our Forests (MOF) program, in addition to other reforestation programs. Activities during the year included stocking surveys (10 004 hectares), mechanical scarification (2 580 hectares), seeding (265 hectares), thinning (1,636 hectares), and planting (1 333 hectares — 1 828 111 seedlings).

The *Silviculture Planning Section* is a new entity within the Reforestation and Reclamation Branch. The major thrusts of this section include the following:

- 1) initiating and carrying out appropriate cost/benefit analysis of silvicultural programs and providing a framework for silvicultural investment decision-making.
- 2) Providing liaison with the planning functions of other AFS branches and with other divisions.

At present, a framework for regeneration and stand growth prediction and decision support is being developed. A consultant has been hired to help with the overall tool architecture and modeling. The target date for this program is March 1990.

There was a total of six operational reclamation projects undertaken and completed.

In *genetics and tree improvement*, a new seed orchard development project was started for Douglas-fir. Planting stock production was continued for three white spruce and two lodgepole pine seed orchard developments already in progress.

Six new research plantings were established. A total of 80 superior trees were located and selected by cruising forest stands in central and southern Alberta. Forty-seven new seedlots were added to our genetics seed bank and 225 seedlots were germination-tested. Wood-specific gravity tests were completed on samples from 33 trees, and fibre length tests were done on 233 trees. Experimental planting stock production consisted of 11 818 seedlings, 1 748 grafts, 476 rooted cuttings stock, and 4 245 potted trees.

In 1987-88, the *Pine Ridge Forest Nursery* continued to place emphasis on improving the overall quality of its

tree seed and the field performance of the seedlings being produced.

The **Seed Program** processed 7 425 hectolitres of pine cones and 8 204 hectolitres of spruce cones. Seed inventory was increased by 6 828 kilograms to a total of 50 270 kilograms of seed in storage for future use.

The **Research and Investigations Program** continued to provide technical assistance in developing production techniques and in monitoring growth rates of container and bare-root seedlings.

The **Bare-root Program** currently has an overall inventory of 15 129 000 seedlings in nursery beds. This total includes 1 448 000 Plug #1 stock. A total of 6 076 000 seedlings were lifted in the fall of 1987, and 7 553 000 seedlings were shipped for planting.

Container seedling production increased over last year to 14 786 000 seedlings. Numbers of container seedlings shipped dipped to 9 723 000 — a 10-year low, — but a record 1 448 000 seedlings were transplanted into bare-root fields for subsequent harvest as Plug #1 stock.

Combined shipping for container and bare-root seedlings in 1987-88 amounted to 17 276 000, which increases the cumulative total to 188 831 000.

The Junior Forest Warden (JFW)

Program continued its upward growth trend established over the past years. By the end of 1987-88, the Alberta program had grown to comprise 640 volunteers supporting 2 600 wardens (boys and girls 6-18 years of age). A wide range of programs and projects was undertaken, all designed to develop an appreciation, awareness, and respect for our natural environment. The summer camp continued to play a valuable part in the program.

Development of the new National JFW program, undertaken by the Alberta Forest Service, neared completion. Many clubs throughout B.C. and Alberta have already started implementation. Efforts initiated by Alberta to expand the Warden program resulted in Newfoundland joining up through sponsorship by the Newfoundland Department of Forest Resources and Lands. Junior Forest Wardens is well on its way to becoming a truly national program.

The Junior Forest Ranger Work

Experience Program provided valuable experience and employment in forest management to more than 80 young men and women in Alberta. Seven camps were operated within the province. The programs were considered highly successful, being beneficial to both the forest districts and the program participants. Many of the students in the program have indicated that they plan to pursue careers in the natural resource management area as a result of their experience with this program.

The Canada-Alberta mobile exhibit trailer, **Alberta's Managed Forests**, completed its second year of operation under the Canada-Alberta Forest Resource Development Agreement. Almost 33 000 visitors toured the exhibit during its 5-month tour of the northern half of the province.

Another major initiative in the area of public awareness was the production of the **Alberta's Forests** magazine. This 24-page magazine, dealing with forest management practices in use in Alberta, was produced by the Department and distributed to over 500 000 households in seven major urban centres just prior to National Forest Week. ▲

Figure 22 - Timber Dispositions Issued: 1987/88

Type	Number Issued
Forest Management Agreement	0
Coniferous timber quota	25
Deciduous timber allocations (DTA)	5
Licences:	
Coniferous quota	42
Deciduous, DTA	2
Commercial Timber Permits:	
Coniferous (green)	55
Coniferous (dead or damaged)	14
Deciduous (green)	4
Deciduous (dead or damaged)	0
Local Timber Permits	1,440
Forest Product Permits (Tree Tags)	32,410
Total timber dispositions issued	33,997



LAND INFORMATION SERVICES DIVISION

The main thrust under the Land Related Information Systems coordination initiative was preparation of the LRIS Network Business Development Plan, now before the Cabinet for consideration. The plan was preceded by an assessment of the market for land related information products in Alberta. Parcel mapping is a significant component of the business development plan. Both a pilot and a prototype project were undertaken to determine optimum content and facilitate development of suitable methodology for a parcel mapping program. Also a high priority, the 1:20 000 digital base mapping project saw 394 additional maps finalized and maintenance of 64 others. An additional 241 maps were at various stages of preparation at fiscal year end. Due to fiscal restraint, work was scaled down on areas relating to geographical positioning, municipal integrated surveying and mapping, and resource information services programs. The White Area Forest Inventory, describing the full timber resources of the agriculture fringe areas, was started. The study is in response to recent economic development opportunities for hardwood with special emphasis on aspen forest.

Framework Survey Control provides the basic survey control network for the province. A total of 566 Alberta Survey Control Marker (ASCM) sites were visited and the on-site activities carried out included 477 inspection reports, 200 cadastral ties, 62 ASCM restored or replaced with helix markers, 495 site surveys completed, 497 descriptions updated, 21 network bracing measurements, 11 forestry towers coordinated, 48 targets placed for new improvement district photography, and 184 targets for previous photography removed. ASCM installation under the original 10-year schedule is virtually completed and the program is entering maintenance phase.

Alberta Township System coordinates were provided for nine additional 1:250 000 National Topographic System (NTS) mapsheets in 1987-88, bringing

the program to 65% completion. Under the field tie portion of the program, ties were completed to 241 township corners in the areas west of Edmonton and Calgary. A total of \$285 000 was expended involving 14 separate service agreements. The coordinate computation portion of the program was completed in nine additional 1:250 000 NTS mapsheets: 72M, 73D, 74L, 84C, G, H, I and P.

Geodetic Computations provided coordinate computation, mathematical adjustment, and analysis of survey control data. It also undertook data management and distribution to users. A total of 50 projects were started and 42 completed. There were 453 new survey control markers (urban) added and 56 horizontal data and 291 vertical data on ASCM revised. Urban projects undertaken included Drumheller, Improvement District 7, High Level, High Prairie, and numerous projects resulting from maintenance activities under the municipal program. Other activities included: the implementation of Multipurpose Alberta Survey Control Operations and Tasks Systems (MASCOT), Phase I, and an extensive preparation for commencing development of MASCOT Phase II in 1988. Good progress was made in preparation for the Northern American Datum (NAD) '83 readjustment.

Highlights of **Photogrammetric Control** activity in 1987-88 include a user service to a variety of clientele which included Forestry, Lands and Wildlife, other provincial departments, urban municipalities, and industry. There were a total of 28 533 aerial photographs indexed to date. Quality control for photography and aerial triangulation for municipal mapping was performed in the City of Camrose. Some research was performed and several technical papers were prepared for publication.

In the area of **Provincial base mapping** at scales of 1: 250 000 and smaller, the 1988 1:1 000 000 Base Map underwent manual revisions and was overprinted with 14 various administrative themes. Work is

progressing to convert this map and its respective overprints to a digitally derived and maintained product over the next 12 months. In 1988 the 1:1 500 000 Public Lands General Classification Series base was revised and printed. Maintenance of the 1:250 000 digital map bases continued and 16 multicolored maps were produced from representation files. Seven additional cities were completed under the 1:20 000 city program. In total, 2 188 conventional and digital maps, 240 base maps, and 68 graphs, charts and forms were completed during 1987-88. In addition 740 bases, 2 504 digital files, and 1 060 prints were distributed to other users (Figure 23).

At the 1:20 000 scale, work on the Provincial Digital Base Mapping continued as a high priority program. A total of 382 representation files and 256 position files were checked and archived. In addition 512 Alberta Township System (ATS) linework files, 361 Digital Elevation Model (DEM) files and 457 hard copy maps were produced. Update and maintenance was carried out on the 64 map bases in the 83M block. In 1987-88, 394 maps were finalized, bringing the program to 42% completion. An additional 241 maps were in various stages of preparation at the end of the year. Although the project's annual budget has been reduced, the work continues to be a major stimulus to the private sector.

Pending completion of the 1:20 000 Digital Base Map, the division is continuing to update the 1:50 000 Provincial Resources Base Map. In 1987-88, an additional 125 maps were completed in high-priority areas as part of this update (Figures 24, 25 and 26).

Our *Municipal Integrated Surveying and Mapping* program provides a province-wide service. Municipal Survey Control plans and coordinates installation and maintenance of high-density survey control under municipal-provincial cost-sharing agreements.

During 1987-88, new survey control projects were completed within and immediately adjacent to: the City of Drumheller, Improvement District 7, the Town of High Level, and the Town of High Prairie. These four projects resulted in the installation of 407 Alberta Survey Control Markers

(ASCM). There were 51 projects involved with maintenance and extension of survey control for municipalities already under the program, resulting in another 235 ASCM being installed. Much of the maintenance work was done in conjunction with densification for urban development. Total new ASCM installed in 1987-88 was 642. Other activities included instructional assistance to the University of Alberta Survey School.

Coordinates for property corners were computed on a revisional cycle for 282 new mapsheets at the 1:1 000 mapsheets and 1 369, 1:1 000 mapsheets on the maintenance cycle.

The *Municipal Base Mapping Program* is responsible for the development of a 1:1 000 digital cadastral map base covering major urban municipalities. The program involves the final phase of the Municipal Integrated Surveying and Mapping Program, which will result in the creation of 1:5 000 scale mapping from the 1:1 000 base. Priority is given to complete all municipalities with a population greater than 3 000 by 1992. During this report period, 566 new 1:1 000 and 35 new 1:5 000 cadastral bases were added to the series, with 1 671 1:1 000 and 122 1:5 000 bases being revised. The Statistical Report Supplement details the status of the program. The beta test of Wild Heerbrugg's geographic information system was drawn to a close (Figures 27 and 28).

Miscellaneous large-scale mapping project requests resulted in completion of approximately 6 700 square kilometres of coverage for both departmental and government clients. These projects included line, digital and orthophoto mapping in addition to several supporting photo control projects (Figure 29).

A major project undertaken in *Natural Resource mapping* was the commencement of the White Area Forest Inventory Project, a digital stand-by-stand forest inventory covering portions of the fringe settlement area of Alberta. The project is made up of 500 townships, of which 65 townships were completed as an internal production prototype in 1987-88 (Figure 30).

Figure 23

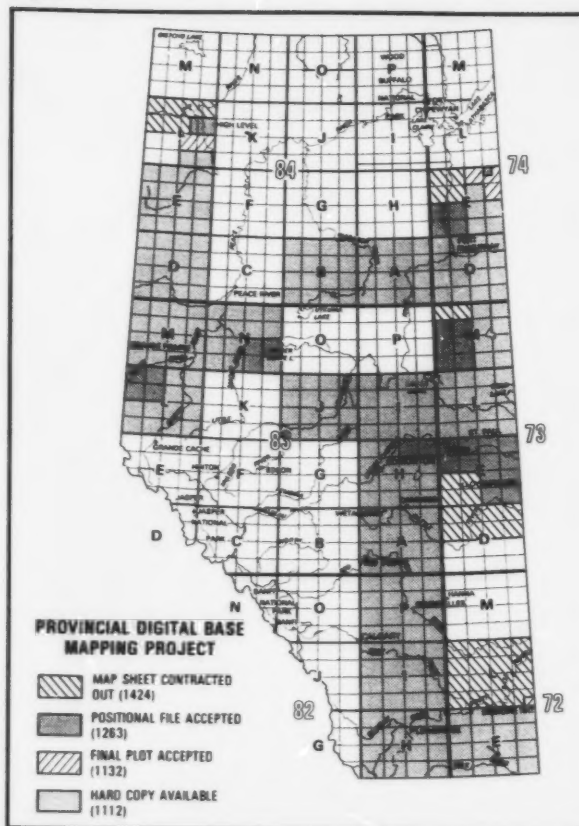


Figure 24

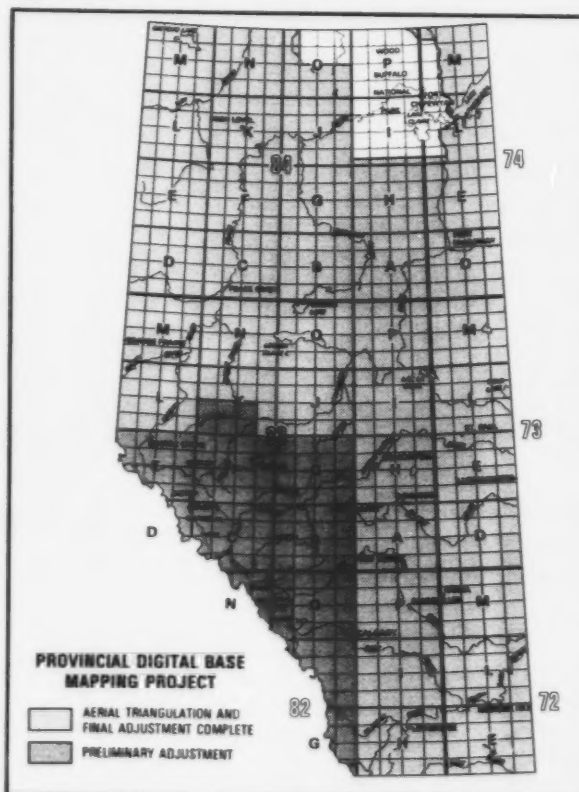


Figure 25

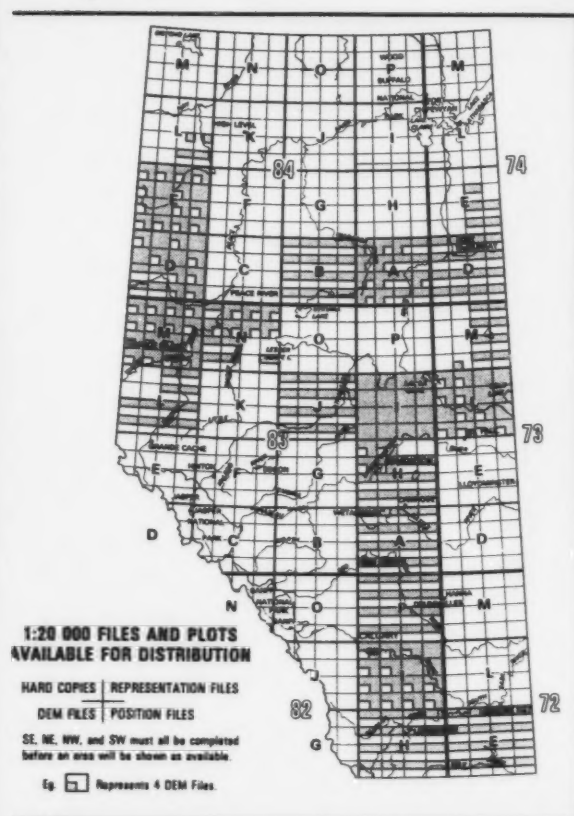
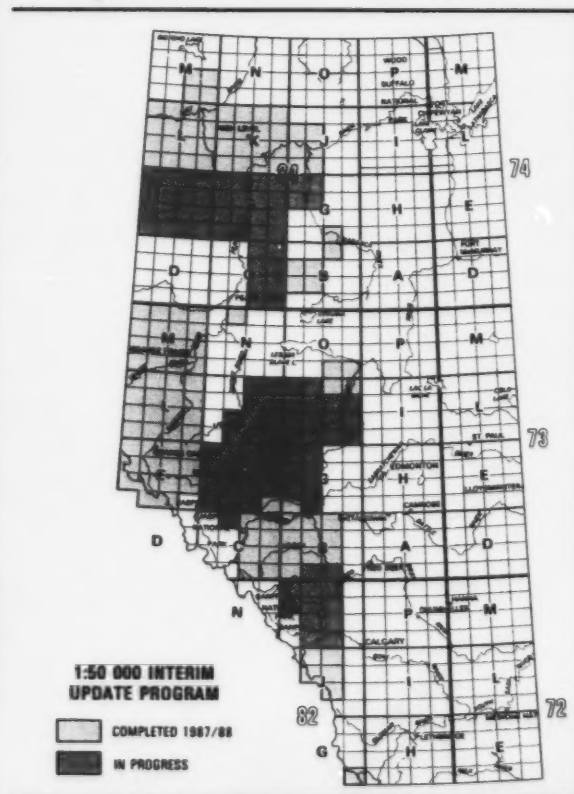


Figure 26



Graphic services continued to be in high demand by department clientele, with 500 user requests requiring 7 247 person-days of production.

Cartographic services were provided to other government departments on a cost-recovery basis. A total of 22 maps were completed through this program, with the contracting of 440 maps for the electoral office of the Legislative Assembly. Major projects completed were the 1988 Alberta Road Map, 1988 Alberta Weight Guide Map, Population by Enumeration, and 1988 Aviation Map.

Distribution Services, responsible for several public-oriented functions, had another successful year. **Maps Alberta**, part of Distribution Services, is responsible for the distribution of maps, aerial photographs, plans, digital products and information to the public, private sector and government departments. Total retail sales generated during this period amounted to \$1 million and the total number of orders generated was 34 844. There was an increase in the sales of maps and air photos to the public sector by 21% in comparison to last year's level. Sales to government departments and Forestry, Lands and Wildlife fell to 70% and 65%, respectively, of last year's levels. Annual dealer sales also declined slightly to 96% of last year's amount (Figure 31).

Maps Alberta took over the responsibility for "quick print" in 1987-88. This prompted the lease of a Canon color laser copier to replace the aging Itek copier. This copier is the only one of its kind in the provincial government and allows Maps Alberta to provide an enhanced level of service to all clients.

During the course of 1987-88, the LISD Revolving Fund broke even according to the objective set out at inception. The break-even point was reached without the benefit of guaranteed sales levels or injection of additional out-of-budget funds. No major pricing changes or elimination of jobs were required to reach this point, and levels of service remained stable.

Another enhancement to the level of service provided by LISD to the public and other government departments was the opening of the

Calgary Information Centre in early February 1988. A number of physically separate government functions were brought together in a central downtown store front location. Services are now provided to complement each other, and duplicate functions have been eliminated or streamlined. Overall, the Information Centre enhances services at a reduced cost.

Production statistics for the **Map and Air Photo Reproduction Services** remained basically the same as in the previous year. The amount of contact prints decreased, while enlargements increased. The Technical Support Unit completed the development of an automated quality control system. The system is now being used to assess the quality of all aerial photography submitted by contractors (Figure 32).

Aerial photography was provided to both departmental and government clients. A total of 161 projects, covering 159 200 square kilometres of Alberta, were photographed at scales ranging from 1:20 000 to 1:40 000. Aerial photo mosaics for departmental and government clients were completed, totaling 46 projects covering 4 000 square kilometres (Figure 33).

Resource Geoprocessing Services provided support to the Department in four areas: provincial digital base mapping, computer mapping applications, definition of long-term geoprocessing requirements, and assessment of new technologies for managing land-related information. A computer program and related process was developed to produce a provincial forest classification to support the forestry sector. A key role was played in the design and development of a new digital forest inventory to identify hardwood resources in the Fringe Settlement area of the province. Revisions were made to the Mineral Resources Graphic System prototype to establish linkage to a new release of the Land Status Automated System, and a pilot project was also conducted. The first phase of the Geoprocessing Systems Requirements study was completed and documented, providing the Department with a directory of data types and information products needed to meet management responsibilities. Research was undertaken at the University of Alberta, and a number of Digital Terrain Models (DTMs) were

Figure 27

1:1 000 and 1:5 000 MAPPING SERIES

MUNICIPALITY	MANUAL		DIGITAL	
	CADASTRAL	CONTOURS	CADASTRAL	CONTOURS
AIRDRIE			X	X
CALGARY			X	
CAMROSE				X
DRUMHELLER			1988/89	1988/89
ID #7 DRUMHELLER			1988/89	1988/89
EDMONTON			X	
FORT McMURRAY		X	X	
FORT SASKATCHEWAN		X	X	
GRANDE PRAIRIE			X	X
LEDUC	X	X		
LETHBRIDGE			X	
LLOYDMINSTER			X	X
MEDICINE HAT (REDCLIFF)			1988/89	X
RED DEER		X	X	
SPRUCE GROVE			X	X
ST ALBERT			X	X
WETASKIWIN				

Figure 28

1:1 000 and 1:5 000 MAPPING SERIES

MUNICIPALITY	MANUAL		DIGITAL	
	CADASTRAL	CONTOURS	CADASTRAL	CONTOURS
BLACK DIAMOND	X	X		
BONNYVILLE	X		1988/89	X
BOW ISLAND			X	X
BROOKS	X	X		
CANMORE	X	X		
CARDSTON			X	X
CARSTAIRS		X	X	
CLARESHOLM			X	X
COALDALE	X	X		
COCHRANE			X	X
COLD LAKE		X	X	X
CROWSNEST PASS			X	X
DRAYTON VALLEY			X	X
EDSON			X	X
FORT MACLEOD		X	X	
GRAND CENTRE			X	X
GRANDE CACHE	X	X		
HANNA			X	X
HINTON			X	X
HIGH LEVEL			1988/89	1988/89
HIGH PRAIRIE			1988/89	1988/89
INNISFAIR		X	X	
LAC LA BICHE			X	X
MAGRATH			X	X
MORINVILLE			X	X
OKOTOKS		X	X	
OLDS		X	X	
OYEN			X	X
PEACE RIVER	X	X	1988/89	
PICTURE BUTTE		X	X	
PINCHER CREEK		X	X	
PONOKA	X	X	1988/89	
RAYMOND			X	X
ROCKY MOUNTAIN HOUSE		X	X	
ST PAUL			X	X
STETTLER		X	X	
STONY PLAIN				X
STRATHCONA, COUNTY OF				
STRATHMORE			X	X
SWAN HILLS			X	X
TABER			X	X
THREE HILLS			X	X
TURNER VALLEY	X	X		
VEGREVILLE		X	X	
VERMILION			X	X
WAINWRIGHT	X	X	1988/89	
WESTLOCK			X	X
WHITECOURT	X	X		

produced for marketing and are being used within the Department. An inventory of remotely sensed imagery retained in the Department was compiled along with a historical perspective record of remote sensing sensors, their specifications and applications. The Alberta Remote Sensing Center joined Geoprocessing Services in the fourth quarter.

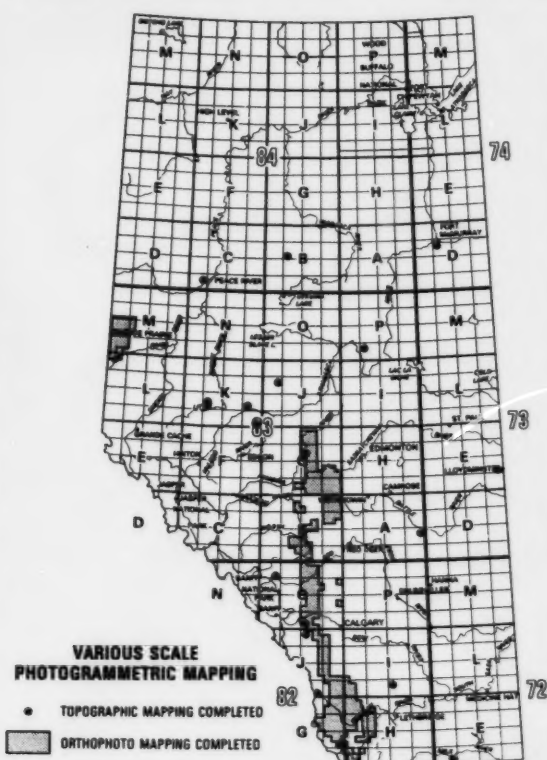
The *Digital Systems Support* program is responsible for the provision of interactive graphics, automated plotting, and data management services to the map production area as well as the management of the Virtual Address Extension (VAX) system at the 50th Street Atria for general use. The major activity continues to be development and implementation of digital mapping projects on the Intergraph and Gerber hardware, and software configuration used for the development and production of base maps. Photo plotting services remained constant, with a total of 2 100 photo plots completed. Pen plots increased 40% to 4 400 over the last year.

The *Planning and Coordination Branch* provided support and long-range planning and coordination of LISD's Electronic Data Processing (EDP) systems and procedures both among branches and also with other government agencies and the private sector. Major activities planned for 1987-88 include purchase of a VAX M2000 computer and Digital Local Area VAX cluster software to provide increased computer resources and networking for the Atria's computer-based systems.

The branch also assisted with the following joint projects: Phase I of the Multipurpose Alberta Survey Control Operations and Tasks (MASCOT) System with Survey Control in preparation of NAD '83; the Parcel Mapping pilot project with Land Survey; and two other systems, the Public Alberta Township System (PATs) and the Data Dictionary/Directory System.

The *Land Information Services Division* has a mandate to coordinate the land-related information services by developing mechanisms to allow the public and private sectors access to this service.

Figure 29



Topographic Map Compilation (Large Scale)

Total area coverage - (mi.)	580
- (km)	1 500
Stereomodels mapped	110
Projects	18

Orthophoto Mapping

Total area coverage - (mi.)	5 976
- (km)	15 482

Thematic Data Capture

Total area coverage - (mi.)	2 020
- (km)	5 230

Activities in 1987-88 included a market assessment for land-related information products and the preparation of the LRIS Network Business Development Plan. A video was also prepared to support the LRIS Business Development Plan. A Data Dictionary/Directory System (DD/DS) prototype was developed and will be used by government departments involved in LRIS developments. The LRIS Group continues to publish its bi-monthly LRIS Newsletter and a Consolidated Bibliography of Land-Related Information Systems.

Resource Information Systems provides inventory and analysis to the Division. Of particular importance is the resource information support provided to Alberta's integrated resource planning process in the form of integrated resource inventories.

A major forest inventory of aspen resources for industrial use was completed for 65 townships in the Drayton Valley area. This program will continue over the next two years to make up a full complement of 500 townships of new timber inventory. Terrain and detailed soil studies continued with the completion of 195 square kilometres (1:50 000 scale) of

physical land classification for rangelands in the southern region.

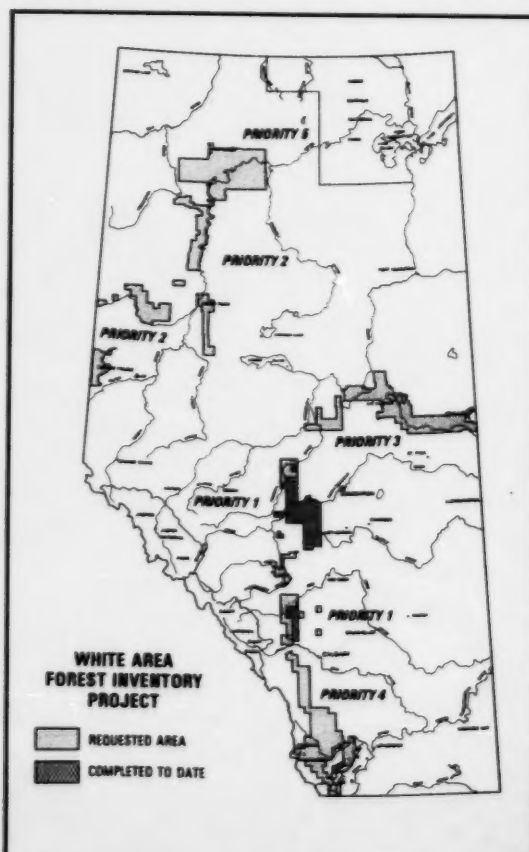
Bird game habitat information was provided for an area of central Alberta and a sheep habitat analysis was completed for a portion of the southern front ranges for Fish and Wildlife. Contract work through the Alberta Research Council provided reconnaissance aggregate inventories for three areas in northern Alberta.

The Climate Program operated two networks of climate data gathering sites. The Information Management Section provided support for natural resources information requests from government and private users.

The Recreation and Conservation Resources Information System provided support to Public Lands and Fish and Wildlife on recreation and conservation decision-making within the White Area of the province.

In the **Land Survey System** area, 521 plans were examined for compliance with related legislation and

Figure 30



mathematical corrections.

Approximately 4 700 survey plans were entered into the Land Survey Data System (LSDS) and indexed on hardcopy township diagrams.

Assistance and guidance were provided to the public, members of Alberta Land Surveyors Association (ALSA), and other government agencies on matters of land surveying. Approximately 19 sections of Crown land were surveyed for settlement purposes.

One resurvey was initiated in the City of Edmonton, and a total of 28 inspection surveys were conducted. The new Surveys Act was assented to on June 17, 1987. Survey Regulations were prepared and circulated for public review.

Significant activity occurred during the year in preparing for a **Parcel Mapping Program**. Pilot and prototype projects were undertaken and completed to facilitate the development of methodology, content and specifications. A users group and technical committees were established consisting of major utility companies and government departments.

By year end, the ground work had been laid to proceed with the program. ▲

Figure 31

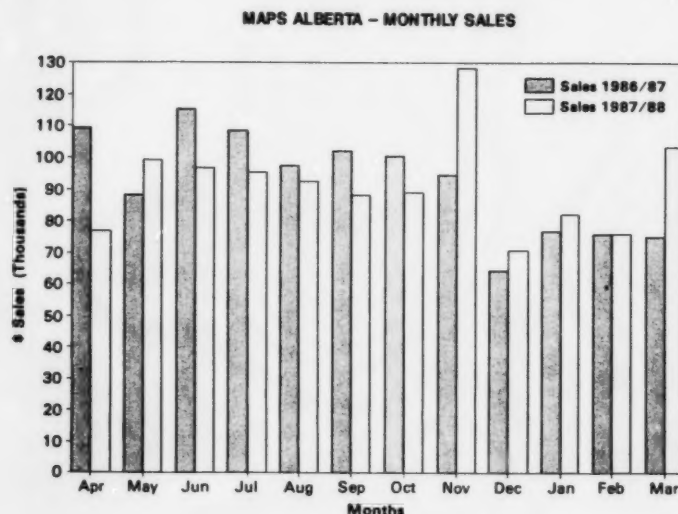


Figure 32

Map and Air Photo Reproduction

Contact prints 10"x10"	175 171
Enlargements (all sizes)	13 403
Diapositives 10"x10"	2 404
Itek prints (various sizes)	20 582
Aerial film processing (m)	95
Graphics reproduction (m ²)	8 907
Diazo reproduction (m ²)	52 007
Micro reductions (m)	300
Micro duplicating (m)	3 600

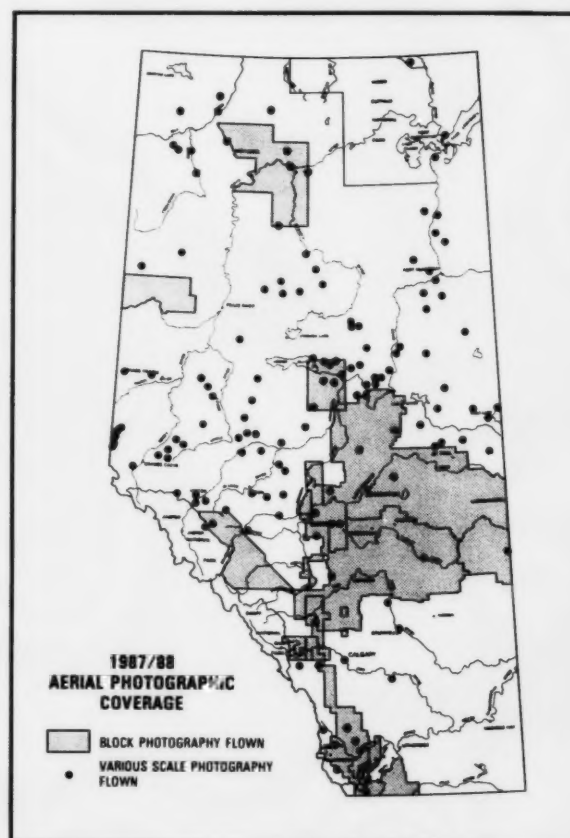
Figure 33

Aerial Photography

Total coverage - (mi.)	61 472 sq.mi.
- (km)	159 200 sq.km.
Line coverage - line mi.	30 283 mi.
- line km	48 734 km
Frames/Photos	25 730
Rolls	92
Projects	151

Photo Mosaic Mapping

Total area coverage - (mi.)	1 821 sq.mi.
- (km)	4 716 sq.km.
Projects	46





POLICY SECRETARIAT

The Policy Secretariat was formally established in December 1987 to ensure development of renewable resource policies consistent with the department's mission and broad government objectives. This mandate has been articulated through several goals.

The Secretariat's first goal is to identify renewable resource management issues significant to the people of Alberta. This is accomplished by continuous liaison with the department's line function divisions; communication with public interest groups; and analysis of trends and monitoring of events that influence renewable resource management.

Another goal is to provide advice to the department's senior management on renewable resource management issues by development, use and promotion of systematic issues management processes; and recommendation of strategies to communicate the department's decisions with respect to identified issues.

The Secretariat also endeavors to provide advice to the department's senior management on proposed or existing renewable resource management policies by development and promotion of systematic policy analysis processes; and application of those processes to the evaluation of existing policies and to proposed policy alternatives.

The fourth goal of the Secretariat is to assist the department's line divisions in developing effective policies consistent with departmental objectives.

In January 1988 the Policy Secretariat obtained the services of a consultant to assist in developing internal procedures required to work effectively toward these goals. The consultant was given the following main objectives as part of the terms of reference: to determine lines of authority and work roles for the Secretariat; to determine goals and objectives for the Secretariat; to establish a response mechanism for ministerial briefing; to develop a system for issue identification for the department; to establish a process to involve the department's management in policy development; to build a framework for policy analysis; to prepare a consistent format and style for policy documents. ▲

PUBLIC COMMUNICATIONS

The function of the Public Communications Branch of Forestry, Lands and Wildlife is to advise senior management on all aspects of public relations for the department.

The services provided by the branch include:

- communications and program planning
- development and placement of advertising through electronic and print medium
- media relations and news release preparation
- display coordination, design and production
- creative design facilitation
- print coordination and production
- audio visual production
- issues management

Public Communications accesses the vast resources of the Public Affairs Bureau in the coordination of private sector suppliers to assist in bringing each print, graphics, exhibit, and audio visual project to a successful conclusion.

Wildlife '87 was again an important initiative during the year with intensive media relations, extensive official openings and communications planning. In coordination with Natural Areas program a number of Dynamic Displays were produced which tour the province regularly.

The implementation of the Natural Areas Program communications plan led the branch to become involved in producing an attractive series of brochures promoting each natural area to the public.

Also in connection with Wildlife '87 was the coordination of a number of Buck for Wildlife project opening ceremonies and the preparation and distribution of information packages to municipal governments.

The yearly Order of the Bighorn Awards is a challenging project and the

1987 awards ceremony and dinner was no exception. The branch assisted in organization, news release preparation, media relations, ministerial speech preparation, and print production.

The branch assisted with a joint announcement with the World Wildlife Fund Canada and the Government of Alberta. The announcement covered a 3-year agreement, "Prairies for Tomorrow," to secure key sites and habitat for Alberta's threatened wildlife. Media relations and coordinating the presentation of a sculpture to HRH Prince Phillip, while in Regina, were part of the branch's activities.

Public Communications also coordinated and assisted in producing visual identity guidelines for the department. After months of extensive research and revisions, the identity program was instituted in August 1987.▲

PUBLIC COMMUNICATIONS STATISTICS

Figure 34

Total Printing Projects	233
Concepts/Finished Art	105
Signage, Plaques, Framing, Novelty Items, Gifts	81
Audio Visual	105
Display Orders	13
Advertising	169
News Releases	61





DEPARTMENTAL SUPPORT SERVICES

A reorganization of the Departmental Support Services within the Departments of Energy and Forestry, Lands and Wildlife was accomplished during the fiscal year. Reporting to the new Senior Assistant Deputy Minister of Finance and Administration are the following Divisions: Automated Information Systems, Financial Services, General Services, Human Resources, and Internal Audit. These Divisions had previously reported to the Associate Deputy Minister.

Automated Information Systems Division

The division provides technical expertise and leadership in automated data and word processing systems to the Departments of Energy and Forestry, Lands and Wildlife. As part of its role, the division has made a commitment to enhance its development capabilities through the use of automated tools (CASE technology), and by further exploiting information processing technology for management of data and information resources.

As of March 31, 1988, Energy and Forestry, Lands and Wildlife had 85 operational systems.

Over the year, a major thrust into integrated office technology was achieved through installation of the Correspondence Management Information System for senior executives. As well, development work continued with the objective of integrating computer applications through integration of data. The department will continue this strategy with a development initiative to integrate the accounts receivable system with revenue and resource management systems.

Systems activities for Forestry, Lands and Wildlife during 1987-88 included the following:

- acquisition of the Correspondence Management Information System (CMIS). This system provides correspondence preparation and management information functions, and will eventually link all executive

and management offices within Energy and Forestry, Lands and Wildlife; and

- implementation of a departmental budgeting system, allowing divisions to enter budget information at the lowest level, and roll up to the departmental level for submission to Treasury. This system is connected to Treasury's central financial accounting system, allowing for automated budget loading and maintenance.

Financial Services Division

The Financial Services Division, headed by a new Executive Director, is composed of five branches: Asset Accounting, Financial Analysis and Planning, Financial Policy, General Accounting, and Liability Accounting.

The Asset Accounting group embarked upon a program to automate the transfer of data from the Land Status Automated System (LSAS) to the Main Accounts Receivable System (MARS). It is expected that the program will improve the efficiency of the operations during 1988-89. Transactions handled by the Asset Accounting Group were up by approximately 5.8% from the previous year, while, at the same time, the number of person-days worked fell by over 8%. This increase in efficiency can be attributed to the cash handling system and to other minor enhancements that have resulted in the ability to keep up with an increasing workload despite downsizing in the staff complement.

One of the major accomplishments in the division during the fiscal year was the finalization of a new budget system in the Financial Analysis and Planning area. This new micro-based budgeting system allows the divisions to accumulate their budgets at the lowest level, then combine the budgets to provide a general divisional budget for each division. At the same time, this information can be provided to the

Financial Analysis and Planning Group which prepares reports for Treasury, Deputy Ministers, and Ministers. With the use of computer graphics, illustrated presentations can be made depicting trends and the consequence of "what if" proposals.

The Department was given permission to utilize fully the Self Pay Purchase Order (S.P.P.O.) system. It had been in a test mode within the Department for approximately three years. This system, which utilizes a cheque attached to a purchase order, allows authorized staff to pay for purchases directly to the vendor. This negates the necessity of invoices, receiving forms, etc., which would be matched to the invoice. The system has now been approved for Government-wide use. The Division assisted other departments of the Government in understanding the concept and provided presentations to departments wishing to use the system. The Departments of Energy and Forestry, Lands and Wildlife issue approximately 1 500 cheques per month for a total value of about \$120 000.

The Financial Policy Group was active during the year updating financial policies to correspond with the new DFS accounting system. Major improvements were made in the handling of travel and moving claims, resulting in a significant decrease in the error rate and faster processing of expense statements. As a result of these improvements, it was possible to embark upon a program of select review of expense claims, thus producing a saving in staff time while still maintaining adequate control.

The number of invoices handled by the Liability Accounting Group during 1987-88 went down by approximately 6.5% compared to the previous year. This decrease in invoices processed can be attributed to a reduction in program activity as a result of the downsizing of the Department. The implementation of the S.P.P.O. system also had an impact on the number of payment transactions. The Liability Accounting Group operated with an average of 8.4% fewer staff than the previous year. This gain in efficiency can be attributed to two new systems that were implemented during the year. A utility bill payment and a contract payment system were

implemented, which allow the direct uploading of invoices to the mainframe computer system instead of needing to have the data entered manually.

General Services Division

The restructured General Services Division is made up of three branches: Accommodation Services, Corporate Records Management and Extension Services, and Crown Land Data Services. Collectively, these branches provide a full range of administrative support services to the operating divisions of Alberta Energy and Alberta Forestry, Lands and Wildlife.

The Accommodation Services Branch ensures that all facilities occupied by Forestry, Lands and Wildlife are maintained and designed to support program delivery.

In capital construction and tenant improvements, the branch initiated and coordinated nine projects with an estimated value of \$425 500.

The primary focus in Crown Land Data Services is the management of the Land Status Automated System. This system received further enhancement and changes in 1987-88. These included the following:

- implementation of direct on-line update by Recreation and Parks through a security subsystem that prevents any corruption of Energy/Forestry, Lands and Wildlife data;
- implementation of Municipal Affairs' Metis Settlement Subsystem and initiation and, in cooperation with Records Management, a review and clean-up of files to complement the system;
- completion of data collection and validation for a post-implementation review of the Release I-III System (not Subsurface System), which documented an annual benefit of \$697 778 in 1987-88;
- completion of system implementation for regional offices in Peace River, St. Paul, Rocky Mountain House, and Lethbridge, and the establishment of a hardware acquisition and distribution plan to install the system in all Public Lands district offices (19 total) and six Alberta Forest Service offices in 1988-89; and

- purchase and implementation of an Office Automated System (DEC), which established standards for office automation in the Departments of Energy and Forestry, Lands and Wildlife.

The Records Management Section includes the following functional areas: Mail and Messenger, Central Records Operation, Micrographics, and Records Systems.

The Records Management program for the departments is recognized as state of the art, and has received recognition on both provincial and international scales.

One of the automated systems that makes the records management program so progressive was developed and implemented in Energy and Natural Resources (now the Departments of Energy and Forestry, Lands and Wildlife) in 1982. This system, File Room On-Line Information Control (FROLIC), has now been endorsed by the Government of Alberta as a new standard and will be implemented in all other government departments within the next 2 years.

The Extension Services Section provides wide support to the operating divisions. It includes Editorial Services, Drafting and Creative Services, Printing and Reproduction, Library Services, and the Information Centres. Emphasis was on the synthesis and coordination of these support services to maintain quality research, publications and presentations, and to increase levels of public services throughout a period of restraint. This year's highlight was the opening of a public Information Centre in Calgary. This required the cooperative effort of the Public Lands, General Services, and Land Information Services (Maps Alberta) divisions, and provides a storefront operation for services and information dissemination to the general public.

Human Resources Division

This division provides services to the department in the areas of recruitment, classification, wage and salary administration, employee relations, staff and organization development, security, and occupational health and safety. These services are provided through offices in Edmonton, Calgary, and the Forest Technology School in Hinton.

Employment levels within Forestry, Lands and Wildlife were reduced to 1 663 permanent positions, 92 project positions. The department continued to participate in the temporary job creation programs sponsored by Career Development and Employment, providing employment opportunities to 292 individuals through the Summer Temporary Employment Program (STEP), 141 individuals through the Priority Employment Program (PEP), and 33 individuals through the Employment Skills Program (ESP).

The **Early Retirement Program** announced in January 1987 had a significant impact on our activity levels. Out of the 150 employees eligible to participate, 94 opted to accept the program. To address the vacancies resulting from the program, and to meet the demands of government restraint, emphasis was placed on organizational reviews. A number of reorganizations were implemented this year involving structural and classification changes, redeployment of staff, and the running of open competitions.

The Training and Organization Development area continued to place emphasis on supporting management development and human resource planning initiatives. A computerized **Human Resources Information System** was implemented, designed to assist in establishing management development plans. Work was continued over a number of areas in implementing staff development and planning initiatives to meet current and future staff and organizational needs.

Accomplishments with the Management Development Program included ensuring management training opportunities were made available to 32% of our department population who are women, and increasing our involvement in the **Federal Career Assignment Program**. Of the total number of employees participating in the department's core management training program entitled **Managing Human Resources**, 33% were women. Five department managers participated in the Federal Government Career Assignment Program, compared with four managers the previous year.

In the department's continuing effort to improve employee productivity, two training courses for departmental managers entitled "**Excessive Absenteeism**" and "**Managing The Unsatisfactory Performer**" were conducted. Both programs were well-received and will continue to be offered.

An **Employee-Management Communications Committee** was established involving staff from Bargaining Division 5 and managers in Fish and Wildlife and the Alberta Forest Service. This committee will make positive contributions to departmental operations and staff-management relations.

Our department **orientation program** for new employees was enhanced and delivery expanded to the regional locations. This included the development of a video outlining the departmental structure and divisional operations.

The Occupational Health and Safety program continued to be enhanced this year with the development of a new supervisory safety program entitled "**Managing Worksites Health and Safety**." A review of the department safety policies was conducted, identifying a need to update current policies and develop new ones.

The Corporate Security area developed and conducted two seminars on "**Security Awareness**" as well as a number of site security reviews during the year. Response to the seminars and reviews was positive, and they will continue to be conducted.

The **Forest Technology School at Hinton** continued to provide and upgrade educational services in support of departmental activities. A lower than normal Forest Technology program enrollment, coupled with continuing government-wide spending restraint, resulted in a slight reduction in school utilization. A total of 1 595 people participated in various training activities. In addition, 875 person-days of school use for meetings and miscellaneous activities were recorded.

Forest fire control training retained its prominent role, with special emphasis on initial -attack programs. Two prescribed burning courses were held, reflecting a growing interest in the

applied use of fire. Enrollment in the second-year Forest Technology program fell to 31, the lowest level since 1971, but is expected to increase significantly next year.

Use of the school facilities by outside agencies continued to grow, reinforcing the importance of the school to local industries, other agencies, and community groups.

Internal Audit Division

This division assists management in the effective discharge of its responsibilities of planning, directing, and controlling by providing analyses, appraisals, recommendations, and comments.

A three-year audit program, updated in consultation with divisional management, addresses the needs of the department and provides management with an operational overview. Particular emphasis is placed on efficiency to assist management in meeting its downsizing goals.

Evaluating and reporting financial activities continues to be important to ensure that internal accounting and operating controls are functioning properly. Emphasis has been placed on reviewing techniques used by management to evaluate program efficiency and effectiveness, and to ensure that results are consistent with objectives.

Major computer-based systems are being examined to confirm that controls are adequate and objectives of the system are being met. Also, since microcomputers are so widely used within the department, new audit techniques have been developed to assess the controls associated with the use of such computers.

Audits were completed according to plan, including numerous special reviews for management. In addition, deficiencies identified by earlier audits were reviewed to ensure corrective action was implemented. The use of private-sector chartered accounting firms enabled staff to spend more time on unique departmental activities.

Internal Audit continues to identify significant tangible savings to be achieved by implementing the recommendations. These savings generally exceed the cost of audits several times over. ▲

Statement of Revenue

ALBERTA FORESTRY, LANDS AND WILDLIFE
For the Year Ended March 31, 1988
(Unaudited)

	1987/88 (\$000)	1986/87 (\$000) (Restated)
Licences and Fees		
Fishing Licences	\$ 1 107	\$ 1 037
Game Licences	4 682	3 918
Landman Licensing Fees	31	28
Forest Technology School Fees	278	366
Timber Dues and Fees	22 010	19 029
	<u>28 108</u>	<u>24 378</u>
Dispositions, Leases and Permits		
Agriculture Leases and Permits	730	736
Grazing Dispositions and Reserve Fees	5 466	4 674
Public Land Leases and Permits	825	840
Resources Development Surface Dispositions	12 632	7 245
Surface Material Dispositions	2 191	1 308
	<u>21 844</u>	<u>14 803</u>
Provincial/Federal Government Agreements		
Timber Export Taxes	22 984	—
Other	938	2 077
	<u>23 922</u>	<u>2 077</u>
From Revenue Producing Assets	<u>1 320</u>	<u>1 375</u>
Sale of Assets		
Homestead and Land Sales	1 512	2 328
Miscellaneous Revenue	33	248
Total Revenue	<u><u>\$ 76 739</u></u>	<u><u>\$ 45 209</u></u>

Prepared by General Accounting Branch
Financial Services Division
August 30, 1988



Statement of Expenditures

ALBERTA FORESTRY, LANDS AND WILDLIFE

For the Year Ended March 31, 1988

(Unaudited)

	1987/88 (\$000)	1986/87 (\$000)
Financial, Administration and Policy and Advisory Services Divisions		
Financial Services and General Services	\$ 6 646	\$ 7 411
Automated Information Systems	5 978	3 312
Human Resources	2 015	2 083
Internal Audit	332	335
Policy Analysis and Planning	322	625
	<u>15 293</u>	<u>13 766</u>
Other Divisions		
Resource Evaluation and Planning	10 952	11 848
Alberta Forest Service	71 657	72 879
Public Lands	17 923	17 698
Fish and Wildlife	22 704	23 744
Foreign Ownership of Land Administration	—	310
Alberta Bureau of Surveying and Mapping	9 313	9 924
	<u>132 549</u>	<u>136 403</u>
Executive Offices	<u>696</u>	<u>534</u>
Special Warrants and Special Programs		
Fire Suppression Activities	25 706	14 163
Forest Industry Development		
- Grande Cache Sawmill Investment	5 000	—
Trapper Compensation		
- Fort Chipewyan Land Claim Settlement	71	—
Crop Damage Compensation Claims	—	3 750
Cree Bank Treaty Entitlement	—	17 600
	<u>30 777</u>	<u>35 513</u>
Total Expenditures	<u>179 315</u>	<u>186 216</u>
Less expenditure recoveries	<u>966</u>	<u>502</u>
Net Expenditures	<u>178 349</u>	<u>185 714</u>

Prepared by General Accounting Branch
Financial Services Division
August 31, 1988

Notes to the Financial Statements

ALBERTA FORESTRY, LANDS AND WILDLIFE

For the Year Ended March 31, 1988

Note 1 - Comparative Figures

The 1986-87 figures have been restated where necessary to conform to the 1987-88 presentation.

Additional statistical information can be found
in the 1987-88 Statistical Review.



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